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REPORT

ON

THE MEDICAL TOPOGRAPHY AND STATISTICS

OF

THE CENTRE DIVISION OF THE MADRAS ARMY.

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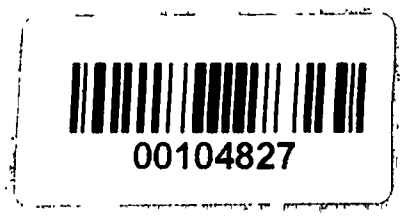

CENTRE DIVISION.

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CENTRE DIVISION.

Position, and general description of the Division.

This division of the Army, as its name implies, occupies the most centrical position as regards the Presidency, it extends both to the northward and southward of Madras, lying between the 11th and 17th degrees of North latitude, and 78° 30" and 80° of East longitude; being in its extreme length nearly 400 miles from north to south; and of irregular breadth, varying from about 40 to 100 miles. It is bounded on the north by the district of Masulipatam, and part of the country of Hyderabad the river Kistnah forming its natural limit; on the west, by the district of Cuddapah and the Eastern ghauts, part of Mysore and the district of Salem; on the south by Trichinopoly and Tanjore, the Coleroon river being the natural boundary on this side; on the east, the entire coast is washed by the Bay of Bengal, except a small part of the Chingleput district, which is bounded by the Presidency division.

Boundaries.

The general appearance of the country towards the coast is low, level and sandy, presenting but little vegetation beyond occasional patches of stunted jungle, with cocoanut and palmira topes. Inland it changes to a gravelly red soil, or to a productive dark loam, which yields abundant crops of rice, cholum, raggy, cotton, &c. The land rises gently to the westward, being interspersed with detached and isolated hills, and in the north west these hills, which are of primitive formation, increase in number and size becoming continuous with the great eastern ghauts, which here separate the districts of Nellore and Cuddapah.

Rivers.

The principal rivers are the Pennar, Paulaur and Pannaur, all of which take their rise in the ranges of hills before mentioned, and flow in an easterly direction emptying themselves into the Bay of Bengal. Besides these rivers the country is intersected by many smaller streams, and tanks of various extent are also numerous,

particularly in the parts of the country most distant from the rivers.

Population. The great bulk of the population, amounting to 2,759,179, consists of Hindoos of the Malabar caste, a small proportion only being Mahomedans.

The chief occupation of the inhabitants is agriculture, but each of the large towns has the usual proportion of artizans, traders, &c.; and weaving to a considerable extent is carried on in some districts, which will be more particularly noticed hereafter.

The food of the inhabitants does not differ from that of the natives of Madras, already described in the report for the Presidency division.

Schools are kept by Brahmins in all the large and some smaller towns for the education of boys, who are taught to read and write their native language, and also the more simple rules of arithmetic.

The dress of the better class of the natives consists of a turband of cotton cloth, an angreka or jacket of the same material, a cummerbund and a loose cloth worn round the loins, which also serves as a nether garment; the poor and ryots wear simply a scanty piece of cloth round the waist, and another as a turband, but many cannot even afford these imperfect coverings and may be seen going about in a state of almost perfect nudity.

Collectorates & Military Stations. In this division of the Army are included the five following Collectorates, viz.; Nellore, Guntoor, North and South Arcot and Chingleput. The principal Military stations are situated in Chingleput and North Arcot.

A general table is given at the end of the report, showing the system of dieting and clothing in prisons; the nature of the work on which prisoners are employed; and the hours of labour, in the several jails throughout the division.

NELLORE.

Description, boundaries and extent of the District.

The collectorate of Nellore lies along the coast, situated between the 14th, and 16th degrees of N. latitude, and 79° 10", and 80° 15" of East longitude.

The boundaries to the north and south, are the districts of Guntoor and Arcot respectively; on the east the Bay of Bengal, and on the west, the eastern ghauts which separate it from the Cuddapah district.

Its length from north to south is about one hundred and seventy miles, and its breadth varies from fifty to seventy, presenting an area of nearly 12,000 square miles. The collectorate is divided into 15 Talooks, and 11 Zemindaries, the latter forming part of what is called the Western Polliams.

The aspect and general appearance of the coast, is that of a sandy plain, with large tracts of stunted jungle, interspersed with cocoanut and palmira trees; the country inland becomes more elevated, and hilly, and the soil is in general more productive.

Rivers and Roads.

Several rivers running in an easterly direction towards the sea intersect the country, and the great northern road from Madras to Masulipatam traverses its whole extent, nearly in a straight line, at a short distance from the coast, and consequently along a plain, but little elevated above the level of the sea; the road throughout the greater part of its extent, is artificially raised above the level of the surrounding country, forming a causeway three or four feet high, long tracts of this road in heavy monsoons, are frequently washed away by the water collecting on its western side, notwithstanding the numerous archways left as outlets

for it, these occurrences cause much interruption to traffic and will it is hoped be prevented hereafter by the adoption of inverted arches, or channels of solid masonry, which have been of late substituted for bridges, the arches of which were frequently burst, by the great pressure from below.

The distance of the road from the sea depends on the bending of the coast, at Goodoor it is twenty miles, at Nellore thirteen, at Ramapatam it is close to the beach, and at Ongole, where it bifurcates into the Hyderabad and Masulipatam branches, it is eight miles distant.

The principal rivers are the Pennar, Soornamooky, Munaroo, Poolaroo, Moose and Gomglacummar; a salt-water creek runs several miles inland near Joovuldinnah, on which a ferry boat is kept for the convenience of travellers, but heavy baggage is conveyed by a circuitous route of about three miles.

Pennar River. The Pennar rises in the Cuddapah hills and runs nearly in a straight line through the talooks of Varegoontapadoo, Ravoor, Sungum, Nellore and Tellanunchy to the sea, giving off numerous channels for the supply of tanks in its passage. The bed of the river at Nellore is sandy, but about ten miles higher up, and from thence to its origin it is stony, and has numerous large and deep hollows in its course, forming natural reservoirs plentifully stored with fish, which on the river coming down in the monsoon, find their way into the tanks and constitute a considerable portion of the food of the inhabitants residing in the neighbourhood. The bed of the river is nearly dry for nine months of the year, but in a few days after the monsoon sets in, it becomes filled from bank to bank, and is then at Nellore five hundred yards and upwards in breadth, and thirty feet deep; much slimy mud is deposited on its banks in the vicinity of Nellore.

Soornamooky River. The Soornamooky river rises in the Chittoor hills, and crosses the Nellore road at Naidoopet-

tah, it has an irregular course north-east and by east, and likewise gives off several channels to supply tanks; its bed is sandy and it is completely dry except during the rains, when it contains a considerable body of water.

Wells and Tanks. The other rivers are comparatively small, and are generally dry except during the rainy season, they give off no water channels, but wells and tanks are constructed along their banks from which the neighbouring lands are irrigated.

Hills. There are no mountains in the district, and the highest hills do not attain to a greater elevation than four hundred feet.

Climate. The climate is dry and salubrious, being subject to no sudden transitions of temperature, and is very similar to that of Madras.

Range of Thermometer. The following is the average mean range of the thermometer throughout the year.

January and February 76½,°	July and August.....84,°
March and April.....82,°	September and October. .81½,°
May and June.....90,°	November and December75½.°

Prevailing Winds. The prevailing winds during the months of January and February, are North Easterly; in March and April, N.E. and S.E.; in May and June E.S.E. and S.W; in July and August E.S.E., and W.N.W.; in September and October the winds become variable and in November and December it blows steadily from the N.E.

Thus the same winds, it will be observed, prevail as at Madras both places being under the influence of the same monsoons.

Rain, average fall of. The fall of rain during the year is from 30 to 40 inches, and occurs partly during the south west monsoon in August and September, but chiefly in Oc-

tober, November and December, in the N.E. monsoon. At other periods of the year rain is but of occasional occurrence. The S.W. monsoon is uncertain and irregular in different years.

Portion of land under Cultivation.

About one half of the district is under cultivation, the other parts being either waste, barren or jungly tracts.

Vegetable productions.

The country south of Ongole produces much rice in the vicinity of tanks, but on the higher lands to the westward, from an insufficiency of water, dry grains only, such as coolty, cholum, raggy, gingilie seed, the castor oil plant and tobacco, can be grown; the northern parts of the district near Ongole likewise produce cotton, cholum, chinna, tobacco and several kinds of dry grain; * chay-root is cultivated on the coast, and many of the ryots grow indigo in dry soils in various parts of the district.

Medicinal plants, &c.

Various medical drugs are produced in the jungles on the western hills, and exported to Madras and other places, the following is a list of the principal of them.

Gentoo.	*Tamil.*	*English.*
Moostevettooloo.	Yettecotta.	Poison nut or Nux Vomica.
Valhoorooppoo.	Monghill wooppoo.	Tabaseer, or Salt of the Bamboo.
Soogundapala.	Nunnareevair.	Country Sarsaparilla.
Ralacoy.	Connacoy	Cassia fistula, or Purging Cassia.
Boocheekragudda.	Poocheekra kalangoo.	
Cunnacomareegudda.	Cunnacamare kalangoo.	
Codesapaulavithooloo.	Vepaulecarsee.	Oval leaved rose bay.
Audevejeelkarah.	Cæet Siragum.	Purple flaxbane.
Nalatungadoo.	Nala auvara.	Country Senna.
Chittra Moloum.	Chittra Moolum.	Lead wort.
Peddamâne cheeka.	Perumarattoo Putta.	Parn marattoo bark.
Pennarooguda.	Amkootang.	Root of flexuous branched winter cherry.
Maridoopetta.	Mauvelingaputta.	Smooth crataeva bark
Bavunjee.	Valuluveyarisie.	Malkungnee seeds.
Tapasæ cheeka.	Tapasemooroongaputta.	White Mooroonga tree.
Woodeman noo do.	Wooddiamputta.	Wooddia bark.
Nalavalaga aucoo.	Coottevella.	Coottevella leaves.
Karrivaympâkoo.	Caraway pillay.	Bergera.

* Is used for dying cotton cloths—red, orange and purple colours.

It is also said the Sambranee or Benzoin, is to be found in these hills.

Principal Towns. The principal towns in the Collectorate are Nellore and Ongole; Nellore the capital and the seat of the chief civil authorities is situated in latitude 14° 29, and longitude 80°, being about 100 miles north of Madras, and 13 miles inland from the sea—the Pennar river flows past the town.

Nellore. The site of the town is well raised, and the soil is red and lateritious. In former days, as was the case with most towns of any extent in India, it was surrounded by an armed rampart which, as well also as the fort of Nellore, is now in ruins. The town is irregularly built, and in some places rather crowded and confined, but there are some good streets occupied by the better classes, and on the whole for a native town it is tolerably clean and airy. The country around is open; to the west is a very extensive tank filled from the river, and in the vicinity of the town and principally to the eastward are extensive fields of rice ground, watered from the tank and also by canals cut from the river, to the south of the town the country is open hilly and covered with a low thinly scattered brushwood.

Population. The population of Nellore was estimated in 1837 at about 20,000 souls, and that of the talook at 54,240, of whom 27,905 were males, and 26,335 females; and in the year preceding, the returns gave a population of 49,509 namely, males 25,125 and females 24,384.

Town of Ongole. The town of Ongole lies in the northern extremity of the Zillah and is of considerable size, it has a small fort in a state of dilapidation, and the river Moose runs close by it; the scenery in the neighbourhood is somewhat picturesque and varied. The population including also that of the talook of the same name, in 1837

was 36,511 ; 19,022 being males, and 17,489 females; in the preceding year the population amounted to 31,666; males 17,502, females 14,164.

In each talook there are generally one or two considerable villages, with many small hamlets or groups of huts.

Total population of District.

The population of the entire Collectorate for the year 1838, has been stated to be 8,46,572 souls—males 4,48,176, females 3,98,396—they are chiefly Hindoos, the majority of whom are cultivators. Weaving is carried on to a considerable extent, and saltpetre and common salt, both of superior quality, are also manufactured along the coast in considerable quantities.

Mineral products.

Iron and copper ores are procurable in the hilly districts between Nellore and Cuddapah, but have not been found to be very productive, particularly the latter which is not now worked.

Breed of Cattle.

The northern part of the district is celebrated for its superior breed of cattle, which are however found to degenerate very rapidly when removed to other parts of the country unless particularly well fed, and large flocks of sheep are pastured for the Madras markets.

Food.

The ordinary food of the working classes is cholum eaten with, or without raggy; and those who can afford it use rice. The Yanadies, a wild jungle race of people, are in the habit of using a great variety of roots, fruits and leaves as articles of food, which others are unacquainted with, and during seasons of famine it has been observed that they suffer less than other classes of the poor.

Prevailing diseases.

The diseases met with near the coast are *beriberi, elephantiasis, lepra, rheumatism, intermittent fever* and *dysentery*;—*cancer* affecting the face, and *diabetes mellitus* are not unfrequently seen in the town of Nellore.

Obstinate *intermittent fevers, sloughing ulcers,* and *guinea worm* are of frequent occurrence in the western talooks and zemindaries. Sores depending on a cachectic habit are very common throughout the whole district, and also diseases of the chest, from neglected colds; but tubercular phthisis, and hepatic complaints are very rare. Diarrhœa is a common and very fatal disease, and enlargement of the spleen is also frequent. Cholera and small pox occasionally break out as epidemics, especially amongst the inhabitants of the hills to the west and south-west of Nellore; and intermittent fever becomes also epidemic in many parts of the district when the seasons are irregular.

Worms are frequent and remarkably fatal in particular villages, being generally believed to be produced by the use of the water of tanks when nearly dry in the hot season; the disease has prevailed most in the neighbourhood of tanks depending on the rains for their supply. The number of worms found after death is often surprisingly great, persons suffering from them have been known to be seized with the usual symptoms of fever, quickly assuming a typhoid character, and terminating fatally in two or three days; in such cases the whole alimentary canal has sometimes been found literally filled with *lumbrici.*

Native treatment of disease.

The cases of beriberi are generally treated by the natives with the treeak-farook, rhubarb, iron rust and aloetic purgatives or colocynth. In lepra the oil of the neem tree (Melia Azadirachta) is used as an external application, and the bark is given internally with cloves, colocynth and sheep's bile. The remedies for rheumatism are principally external applications, and the internal use of some mercurials. Fevers are treated by starvation or warm decoctions, and occasionally with mercurial and drastic purgatives. The neem tree bark is also used, and arsenic is not unfrequently given in obstinate cases; in long protracted agues charms are employed as a last resource. Dysenteric cases are treated chiefly with a preparation of opium and pomegranate bark, with spices and cas-

tor oil; fomentations to the abdomen are also commonly used, but the abstraction of blood forms no part of native practice. A combination of iron rust and colocynth, with alkaline earths, such as chunam and burnt bones, are the remedies employed in splenitis. Astringents are usually applied to sloughing ulcers, with poultices and simple dressings. Almost all diseases of the chest when unattended with fever, are treated with iron rust. The natives also frequently resort to change of climate on a long continuance of any disease, and they often on such occasions undertake a pilgrimage to some sacred pagoda or temple; but their birth place or the residence of friends is more frequently selected.

There are no troops of the line either European or Native stationed in this district, the table of diseases hereafter given therefore refers only to the prisoners in the Jail at Nellore.

Jail description of. The Jail is situated a little to the S. E. of the town, surrounded on two sides by paddy fields, above which it is raised about six feet. In the immediate vicinity are three water courses from the river, which supply the fort ditch, the jail wells, and also serve to irrigate the adjacent lands.

The structure itself, which is calculated to contain upwards of 800 persons, consists of a double range of buildings forming two distinct squares, both contained in an area of 147 yards by 50, being enclosed with a wall 11 feet high; it is provided with sentry boxes on the top, commanding a view of the interior of the squares from which any outbreak, or riot among the prisoners can speedily be discovered; these two buildings are called the old and new jail; the first was built about 34 years ago, but being found to be too small, the new jail, together with the hospital, were added in 1825, both buildings are pent roofed and tiled; the old jail is appropriated for the unconvicted, or prisoners under trial, and the new jail is set apart for convicts. The old building is

the smallest and consists of nine cells varying from thirty-four to fifty feet in length, by ten in width, the doors and windows opening into its area. The new jail is also in the form of a square, the cells are ten in number being loftier, of greater extent and more uniform in their proportions than those of the other; six of them are 57 feet by 17, and the other four 49, by 17 feet. Small circular openings are cut through the back-wall of all the cells in both jails, but are scarcely sufficient to ensure a thorough ventilation. The floors are of clay, raised considerably from the ground, and the drains round the buildings keep them perfectly dry.

Jail Hospital. The hospital is a line of building in the same enclosure, extending across its whole breadth, at the southern part; it is well raised, airy and divided into three wards, the windows being provided with venetian shutters; it is pent roofed and tiled, with a double verandah and calculated to contain 60 patients; a dispensary and surgery are attached to it. The patients in hospital are not provided with cots, but lie on mats on the floor.

Management of Prisoners. The prisoners when committed to jail are severally examined by the medical officer to ascertain whether they have had small pox, or have been vaccinated; and when no unequivocal marks of either disease exist, the person is vaccinated. Such as have clothes are allowed to retain them, and to others, they are supplied, each receiving a new cloth and cumbly annually.

The usual system of occasional health inspections is adopted in this jail, being made more or less frequently according as the prisoners may be in a crowded and unhealthy state, or otherwise. The allowance of rice is reduced and condiments increased when considered necessary; altogether the jail discipline has been well regulated for several years past, both by the judicial and medical departments.

JAIL OF NELLORE.

No. 1.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Diseases for* 10 *years.*

CLASSES.	DISEASES.	Years. 1829 to 1838. Aggregate Strength 2,594. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each Class of Diseases. 1st Half. Adm.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total Admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers	Febris ephemera	385	1	221	0								
	,, intermit: quot	914	11	531	13	1416	17	1209	14	3624	31	97 ·401	1 ·181
	,, ,, tertian.	2	0	40	0								
	,, remitteus	115	5	16	1								
	Cholera	66	35	37	24	66	35	37	24	103	59	3 ·823	57 ·281
Diseases of the Abdominal viscera	Diarrhœa	109	5	102	8								
	Dysenteria acuta et chronica	110	5	90	16	267	11	208	24	475	35	17 ·631	7 ·368
	Obstipatio	48	1	16	0								
	Hepatitis acuta et chronica	1	0	0	0	1	0	0	0	1	0	0 ·037	0 ·0
Diseases of the Lungs and Heart.	Ast' ma	8	1	5	1								
	Pneumonia	47	8	12	1								
	Carditis	1	1	0	0	59	12	17	2	76	14	2 ·821	18 ·421
	Phthisis pulmonalis	3	2	0	0								
Diseases of the Brain.	Apoplexia	1	1	1	1								
	Epilepsia	0	0	3	0	3	1	4	1	7	2	0 ·259	28 ·571
	Mania	2	0	0	0								
Eruptive Fevers	Variola	48	10	12	1								
	Varicella	126	2	7	1								
	Erysipelas	0	0	1	0	175	12	38	2	213	14	7 ·906	6 ·572
	Rubeola	1	0	18	0								
Dropsy	Anasarca	54	8	41	7	54	8	41	7	95	15	3 ·526	15 ·789
Rheumatic affections.	Rheumatism: acut: et chronic:	65	2	75	1	65	2	75	1	140	3	5 ·196	2 ·142
Venereal affections	Syphilis primitiva	3	0	4	2								
	Gonorrhœa	5	1	2	0								
	Hernia Humoralis	5	0	2	0	15	1	8	2	23	3	0 ·853	13 ·043
	Stricturæ urethræ	2	0	0	0								
Specific diseases	Atrophia	0	0	1	1								
	Lepra	0	0	1	0	38	0	11	1	49	1	1 ·818	2 ·040
	Dracunculus	38	0	9	0								
Diseases of the Eye	Morbi Oculorum	8	0	6	0	8	0	6	0	14	0	0 ·519	0 ·0
do. of the Skin.	,, Cutis	144	0	56	0	144	0	56	0	200	0	7 ·423	0 ·0
	Other diseases	906	8	800	6	906	8	800	6	1706	14	63 ·325	0 ·820
	Total	3217	167	2509	84	3217	107	2509	84	5726	191	212 ·546	3 ·335

JAIL OF NELLORE.

No. 2.—*Table exhibiting the Number of Admissions and Deaths of the Prisoners under Trial, from each Class of Diseases for* 10 *years.*

CLASSES.	DISEASES.	Years. 1829 to 1839. Aggregate Strength 2174. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each class of Diseases. 1st Half. Adm.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers.....	Febris ephemera	78	3	34	0	226	10	296	4	522	14	21 ·050	2 ·682
	„ intermit.quot.	137	5	252	4								
	„ tertian.....	0	0	4	0								
	„ remittens....	9	0	5	0								
	„ continua.....	2	2	1	0								
	Cholera.....	54	26	26	13	54	26	26	13	80	39	3 ·233	48 ·750
Diseases of the Abdominal viscera.....	Diarrhœa.....	46	5	118	43	127	16	237	76	364	92	14 ·743	25 ·274
	Dysenteria acuta et chronica.	62	11	106	33								
	Obstipatio.....	19	0	13	0								
	Hepatitis acuta et chronica...	1	0	0	0	1	0	0	0	1	0	0 ·040	0 ·0
Diseases of the Lungs	Catarrhus.....	0	0	2	0	10	3	5	1	15	4	0 ·606	26 ·666
	Asthma.....	2	0	2	1								
	Pneumonia.....	7	2	1	0								
	Phthisis pulmon	1	1	0	0								
Diseases of the Brain.	Epilepsia.....	0	0	1	0	14	0	20	3	34	3	1 ·374	8 ·823
	Paralysis.....	1	0	0	0								
	Amentia.....	0	0	4	1								
	Mania.....	13	0	15	2								
Eruptive Fevers....	Variola.....	121	30	43	13	465	33	62	13	527	46	21 ·301	8 ·728
	Varicella.....	344	3	14	0								
Dropsy.....	Anasarca.....	54	14	80	27	54	14	80	27	134	41	5 ·416	30 ·597
Rheumatic affections.	Rheumat. acutus et chronicus	14	2	9	0	14	2	9	0	23	2	0 ·929	8 ·695
Venereal affections...	Syphilis primitiva.....	0	0	2	0	6	0	5	0	11	0	0 ·444	0 ·0
	Gonorrhœa.....	3	0	0	0								
	Hernia Humoralis.....	3	0	3	0								
Specific diseases.....	Atrophia.....	1	1	0	0	19	1	20	0	39	1	1 ·576	2 ·564
	Lepra.....	0	0	0	0								
	Dracunculus...	18	0	20	0								
Diseases of the Eye...	Morbi Oculorum	5	1	3	0	5	1	3	0	8	1	0 ·323	12 ·500
do. Skin...	„ cutis.....	213	1	172	0	213	1	172	0	385	1	15 ·561	0 ·259
	Other diseases..	79	4	98	9	79	4	98	9	177	13	7 ·154	7 ·344
	Total....	1287	111	1033	146	1287	111	1033	146	2320	257	93 ·775	11 ·077

Diseases of Prisoners.

The preceding tables show the diseases which have occurred in the jail, during ten years ending December 1838; and those to which the inhabitants of the district generally are subject, do not materially differ from them.

Remarks in reference to the foregoing tables of Diseases.

The average annual strength of convicts, see table No. 1, has been 269; and the average annual admissions excluding the class of "other diseases" 402; with a mortality of 19 annually, but excluding cholera it is little more than 13; in 1833 and 34, this average was greatly increased, especially in 1833, when famine prevailed in this, as well as in the neighbouring districts of Chingleput and Guntoor; during these years the admissions were 1,847, and the deaths 82; the increase was occasioned by *fever, cholera, bowel complaints* and *eruptive diseases.* It should be mentioned also that the strength of this class of prisoners, during these two years, only exceeded the usual number by about one fourth.

The average number of unconvicted prisoners or waiting for trial, see table No. 2, for many years, has only been 66; but during the two years alluded to it amounted to 859, and in this period there were no fewer than 1,737 admissions into hospital, with 227 deaths.

The famine was so severely felt in this district, that the poor after much protracted suffering, were frequently induced to commit petty offences to gain admission into the jail, where they were certain of procuring food.

The principal sickness amongst the unconvicted prisoners and the greatest part of the mortality also, have been from the same diseases as in the convicts, and it may be interesting to enter a few remarks respecting them here.

Fever.

Fever of the intermittent type has always been frequent in this jail; it is generally very mild, though occasionally apt to relapse on exposure, and during the wet season it is often complicated with an inflammatory affection of the

lungs requiring active antiphlogistic measures, with the use of mercury and antimonials, previous to employing the sulphate of quinine. This complication has generally been observed to occur amongst prisoners who work within doors, and has been attributed to their incautiously exposing themselves to cold when heated and fatigued; and on dissection the lungs have generally been found hepatized.

The tables likewise shew that idiopathic pneumonia is not of unfrequent occurrence.

Cholera. Cholera visited this district in the years 1832, 33 and 37, it occurred with greatest severity in 1833, when it prevailed more or less over the whole of the Collectorate; in 1832 and 37, it was distinctly traced as spreading from the westward, where it originated amongst the Cuddapah hills.

Dysentery. Dysentery, this disease will be observed to have been frequent, and very fatal; it is seldom absent from this jail, but may be said to have been epidemic in 1833 and 34, amongst both classes of the prisoners; but especially among those waiting for trial. The following were the symptoms of the disease as it occurred at that period; dejections frequent, highly offensive, unattended with griping, straining or pain in the abdomen on pressure; the pulse being small, quick and fluttering; and the tongue covered with a dark fur; great debility and emaciation rapidly supervened.

The frequency of the purging was often alleviated by treatment, the stools assuming a pretty natural appearance before death, which in many instances occurred suddenly on the patient sitting up to take food.

The body after death emitted a peculiar and very offensive odour; and on examination the colon from the valve downwards, was frequently found in a sphacelated state; in other instances, the mucous coat was ulcerated, either in large patches or small round spots, presenting the appearance of the pustules of small pox;—in but very few cases

were the small intestines at all affected, and but seldom was any other organ diseased; the liver in all cases appeared healthy and the gall bladder contained healthy bile, the lungs were generally pale and their structure normal.

This disease as it usually occurs in the jail is tractable seldom resisting the usual treatment, in the epidemic however under consideration, it was on the contrary very fatal; calomel was injurious, ipecacuanha and opium, with anodyne enemata being the most efficacious mode of treatment, when aided by astringents, tonics and a mild nourishing diet.

Diarrhœa. The cases of diarrhœa occurred chiefly during the above years, and may be said to have been a modification of the same disease; it was attended with an equal, if not a greater ratio of mortality, and the same post mortem appearances were observed as in the dysenteric cases, the exciting causes in both being the same, viz. extreme want and unwholesome food.

At the time that dysentery and diarrhœa were so frequent, the allowance of rice was diminished to half a seer, the quantity of condiments being at the same time increased as a prophylactic measure, with much advantage.

Pneumonia, and Hepatitis. Though pneumonia as already mentioned, has been frequent, but few cases of tubercular phthisis have occurred; and hepatitis has scarcely been observed.

Ulcers. Amongst the class of "other diseases," ulcers form a large number of the admissions, they are generally produced by the friction of the chain or iron fetters, on the legs and feet: they not unfrequently assume a sloughing character in persons of a bad habit of body; and in such cases constitutional as well as local treatment is requisite to induce a healing process. Tonics, with sulphuric or nitric acid, have been found very useful, and bark combined with stimulants, has likewise proved beneficial, with the local application of nitric acid in an undiluted state and hot dressings.

GUNTOOR.

The collectorate of Guntoor including Palnaud is the most northerly part of the Carnatic, and formerly belonged to, or was included in the northern Circars.

Situation, Boundaries and extent. It lies between the latitudes of 15° 35", and 16° 50" North; and longitude 79° 35", and 81° East, and is of an irregular oblong form; it is bounded on the north by the district of Masulipatam, and part of the Nizam's territories; on the south by the Ongole district, and the bay of Nizampatam; on the west by the Cuddapah district, and Nizam's country; and on the east by a branch of the river Kistna, which separates it from Masulipatam. Its superficial extent, is estimated at 3,500 square miles.

Description of the surrounding Country. Towards the sea the general appearance of the country is flat and low, but inland it is more elevated and hilly, and in the Palnaud division which forms the west part of the collectorate, the hills chiefly composed of basalt, are covered with jungle. Earthquakes. Earthquakes have occurred several times in this part of the Zillah, and a tradition exists amongst the natives, that some of these hills were volcanos in former days, but there is no appearance of a crater on any of them, nor is lava found in the vicinity.

Geological Observations. Beds of white and red lime stone of a close texture and veined, also occur in the district, they are of great depth, and extend in some places many miles in length, giving a gently undulating appearance to the country; from the south bank of the Kistna at Warapilly,

where the lime stone is seen forming as it were a perpendicular wall on its banks, of nearly 40 feet in thickness, it runs in a south-east direction for upwards of 20 miles, being pierced occasionally by hills of basalt; on the opposite side of the river a striking contrast is observed, the formation being partly primary sand stone, but chiefly green stone, horn blende, granite of a fine texture and gneiss.

Rivers. The principal river is the Kistna, which winds round the western side of Palnaud, and along the northern part of the district, forming a natural boundary in these directions; about 23 miles from the coast it divides into two branches, the smaller bends to the south and enters the sea at Gungada-polliam in Guntoor, the other and larger one runs into the Masulipatam district.

The bed of the river is so low as to render it difficult to obtain water by means of channels, and it is only when it is full that water can be directed from its course for the purposes of irrigation; small canals have been opened to supply the tanks in the direction of Rapully near the coast, but the water can only flow into them when the river is very full.

There are several small rivers and streams in this collectorate, the principal of which are the Goondama, Nullamooda, Nagalare and Pillaur—The Goondama divides the district of Guntoor from Ongole; the Nullamooda rises in the Innacoondah hills in Palnaud, and traverses a course of fully one hundred miles before it reaches the sea, filling several tanks in its way; the Nagalare and Pillaur in Palnaud, are two small streams which run northward and fall into the Kistna. Where the Nagalare passes through a range of hills near Carampoondy, it was at one time dammed up and a lake of large extent formed, but the bund is now in a state of decay, and the river has for some time past flowed without obstruction through the opening at Carampoondy, irrigating but a small portion of land.

There are also several smaller streams rising in the hills and higher lands, inconsiderable in themselves, but locally of

importance as supplying tanks near the villages in their course.

Soil. In the Guntoor district, except near the sea where it is sandy, the soil is generally black and loamy; on the banks of the Kistna it is of a rich alluvial nature; and near the villages of Mundarum and Bellumcondah it is impregnated with salt-petre which is largely manufactured at these places. A great proportion of Palnaud, from its being hilly and stony, is uncultivated, these hills as already mentioned consist of basalt rising through beds of lime stone, which in many places near the surface assumes a slaty structure and is used by the natives for roofing their houses; most of the hills, and many of the valleys, are covered with jungle, in other situations however the soil is very productive. Iron ore is found in large quantities, and fine grained marble it is said, might be obtained with but little labour or expense.

Vegetable produce. Betel, tobacco, cotton, cholum, chillies, onions, turmerick, natchney, mukka-cholum, chay root, bojra and various other grains and roots are cultivated. The harvest season may be divided into the three periods in which different kinds of grain are sown; the first that for the bojra crop and mukka-cholum, commences with the setting in of the south west monsoon early in June; this is succeeded by the second or more advanced season, that for cholum, the staple crop of the district; and in the third which commences about the end of September, grain, oil seeds, varega,&c. are sown in the low lands. In the eastern part of the district, a description of paddy called vellavadum, is grown which is chiefly watered by the rains, but it also receives an occasional supply from the Kistna when it overflows its banks, the inundation extending inland about eight miles.

Instruments of Husbandry. Plough. The common country plough is still in use, but attempts are making to introduce the cast iron plough, with which some of the ryots have been provided.

Gooroo. The Gooroo an instrument for sowing seed, is also in use, it consists of three hollow bamboos fixed to a frame work in a vertical position, converging towards the top, where they are connected with a cup for the reception of the seed, and separated at the lower ends a short distance from each other.

The husbandman as he walks along, deposits the seed in the cup, from which it passes through the bamboos to furrows made by the instrument. The furrows are afterwards closed in by what is called the goontaka which is a piece of iron two feet long, and about one inch in breadth and thickness, attached to the apparatus, by which the seed is completely covered in.

Manure. Manure is considered indispensable in garden lands, and is also requisite for the poorer soils, where dry grain is grown, the dung which is used for this purpose is collected in the villages and from cattle, sheep's dung being the most prized.

Tanks. Tanks are not numerous, nor are there any of great extent in this zillah, with the exception of the tank at Baupetlah which is about eight miles in circumference, and is filled from the river Nullamudda, this tank is very shallow and affords but a limited supply of water. The contrivances for raising water are the pacotta, and the large bucket worked by bullocks; but when the tanks are low the gooda or basket is used, which is worked by manual labour.

Hedges of prickly pear are constructed round garden lands, but fields are only separated from each other by small banks.

Cattle. The cattle of this part of the country are in much repute, and bullocks are exported for sale to various places; they resemble the Nellore breed but have been crossed in some parts of the district with others of an inferior description, and attention is necessary to prevent them

from degenerating; the price of a pair of bullocks of the best breed varies from 70 to 140 Rupees.

Assessment. The assessment of the land-holders varies from 100 to 300, and even 1,000 rupees, but the general average is about 100 though in some cases it is even as low as one rupee.

Manufacture of Cotton Cloth. Cotton cloths are manufactured to a considerable extent, and are exported with the superfluous produce of the land to Madras, Chittoor, Wallajahbad, Masulipatam and to the Nizam's country, partly by land and partly by sea.

Roads. The great northern road passes through Guntoor to Masulipatam, branches likewise run to Cuddapah and Hyderabad; where the roads lead through cotton ground they are heavy, and become almost impassable in the wet season; the by-roads are very indifferent, and can only be traversed by the native bullock carts or by bullocks, the principal carriage for the internal traffic of most parts of the presidency. The rivers in this part of the country are either altogether dried up, or easily fordable in the hot season, and in the monsoon they are crossed by means of boats, there being no bridges; the ferry boats on the Kistna are of a round shape, made of basket work covered with leather, and are capable of conveying from 30 to 40 persons at one time.

Talooks. The collectorate is divided into talooks or estates, each of which has a principal town or village, of the same name, besides several smaller villages and hamlets; the principal towns are Guntoor, Innacondah, Caumulpaud and Nizampatam, in Guntoor; and Trivericottah and Datchapilly, in the Palnaud district.

Town of Guntoor. The town of Guntoor the capital of the collectorate is situated in latitude 16° 12" North, and longitude 80° 20" East, it is twenty-five miles from the sea, and nineteen from the right bank of the Kistna, the country for several miles around is open and flat, the nearest high ground

being a range of hills lying twelve miles to the north-east. The soil in the vicinity is black and produces very luxuriant crops of bengal gram or chenna, cholum and cotton.

The town is divided into what is called the old and new town, it is very irregularly built, and in some places rather crowded particularly the old streets which are chiefly occupied by the lower orders.

Population. The population is estimated at about 20,000 souls; and as might be expected from its distance from hills, jungles or swamps, Guntoor is remarkably healthy.

Innacondah. Innacondah is the principal village or town in the talook of that name, near to which shocks of earthquakes have sometimes been felt; the population of the talook in 1837, was 37,752;—males 19,582, and females 18,170; and the number of houses 14,366, there being less than three persons to each house.

Nizampatam. The talook of Nizampatam is situated on the coast, and a considerable trade is carried on at the town of that name; its population, in 1837 was 24,643;—males 13,168, females 11,475; and the number of houses 7,682 or little more than three persons to each house.

Timmericottah. In Palnaud, the village of Timmericottah lies about 77 miles west by north from the town of Guntoor, the population is about 3,000; in 1837, the returns gave males 1,546, females 1,517. A few miles to the west of this town is a cataract formed during the rainy season by the small river Yedellapoodah, which is at other times perfectly dry; the water falls from a height of about 60 feet into a basin 120 feet in breath, the sides of which are ornamented with several small hindoo places of worship; this fall is taken advantage of for the purpose of irrigation.

Maherla. Maherla another considerable village is situated 76 miles west of Guntoor, the population in 1837, was 15,137;—males 7,683, females 7,454; number of houses 10,281.

Population of the Collectorate.

The whole population of the collectorate was estimated in the returns for the year 1837, at 2,54,902; being 1,35,582 males, and 1,19,320 females; and the number of houses and huts 92,471, or somewhat less than three persons to each dwelling. In 1831 and 1832, it amounted to 5,12,317 souls, but the famine which occurred in the year following reduced the number, more than one half; during the prevalence of famine, the population is not only reduced by sickness and death, but whole villages become deserted; and many years elapse before it again equals what it previously had been; and up to the present time that of the district of Guntoor is from 2,70,000 to 2,80,000 less than in 1831.

The inhabitants are chiefly hindoos, one-eighteenth part only being mahomedans, and one-seventh part of the present population belong to the brahmin caste.

Climate.

The whole of the collectorate lies within the influence of the south west and north east monsoons, the former commences in May, and occasional rains continue till the month of August, moderating the heat of the land winds which blow occasionally with great strength across this part of the country; a great quantity of rain also falls in the months of September, October and November. The heat at Guntoor is greatest from the middle of March to the middle of June, and from the open nature of the country around the town as already described, the land winds blow with considerable violence, but during the most part of the year the station is comparatively cool. The coast possesses many advantages, and at Nizampatam, from its jutting considerably into the sea, the relaxing effects of the southerly winds are not felt so much as at Madras.

Prevailing diseases.

The diseases met with are much the same as in the Nellore collectorate, but from the returns of sick in the jails, the only data from which an opinion can be formed, there being no military stationed in this district ex-

cept a few native veterans at Guntoor, it would appear to be much more healthy.

The Zillah court and jail are situated at Guntoor. Previous to 1838 the mud built houses occupied as a jail were small, ill ventilated and altogether of a very faulty construction, yet notwithstanding these circumstances, and the prisoners being often crowded together, the health of the inmates has been equal to that of any other jail in the division, an evident proof of the salubrity of the station.

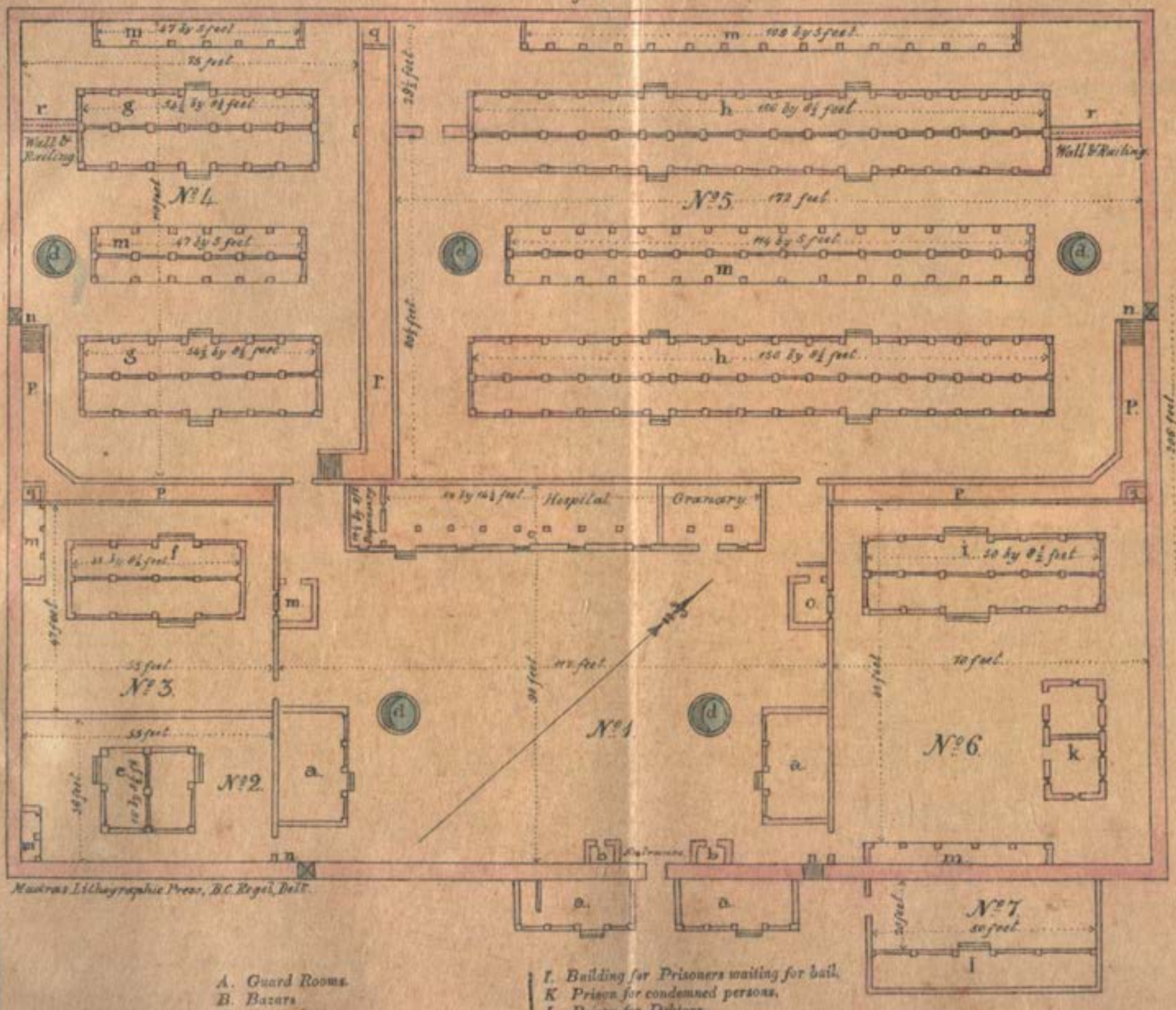
New Jail. The new jail is situated about 1½ mile from the town on open, dry and slightly rising ground, occupying a space of 85 by 69 yards, and surrounded by a wall fourteen feet high. It consists of several buildings in separate areas, divided from each other by walls eight feet high, for the various classes of prisoners as follows, for females, persons waiting for trial, prisoners sentenced to hard labour the most numerous class, prisoners waiting for bail, for condemned persons and lastly for debtors. The buildings are all built of brick and well ventilated, they are pent roofed and tiled, the floors being of clay and raised one foot from the ground, the whole affording accommodation for 500 prisoners. The out houses and necessaries are conveniently placed, and there is also an ample supply of good water within the walls.

Jail Hospital. The hospital is in the same enclosure and similarly constructed, but floored with chunam, it is also raised one foot from the ground, and consists of one ward 60 feet long which can accommodate from 35 to 40 patients.

All these buildings are kept dry and clean by well arranged drains, and being considered a very complete structure, a plan of the whole is annexed.

The following table shews the nature and amount of disease and mortality with the per centage of sick to strength, and of deaths to disease, during ten years ending December 1838.

NEW JAIL and HOSPITAL at GUNTOOR.



Madras Lithographic Press, B.C. Ergel, Delt.

A. Guard Rooms.
B. Bazars
C. Hospital.
D. Wells.
E. Prison for Females.
F. Building for Prisoners waiting for trial
G. Buildings for Prisoners Sentenced.
H. Buildings for Prisoners Sentenced to hard Labour.

I. Building for Prisoners waiting for bail.
K Prison for condemned persons.
L. Prison for Debtors.
M. Cooking sheds.
N Outlets for the drain.
O. Necessary.
P. Places for the Sentries to walk.
Q. Sentry Boxes.
R. Wall and Railings.

Situation of Jailer's House

Assist^t Jailer's House

JAIL OF GUNTOOR.

No. 3.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Diseases for* 10 *years.*

CLASSES.	DISEASES.	Years 1829 to 1838. Aggregate strength 3437. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd	Admissions and Deaths from each Class of Diseases. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average percentage of death to sick.
Fevers	Febris ephemera	6	0	6	0	88	8	216	15	304	23	8 ·844	7 ·565
	„ intermitt quot	62	5	193	13								
	„ „ tertiana	1	1	5	0								
	„ remittens	19	2	12	2								
	Cholera	83	34	23	10	83	34	23	10	106	44	3 ·084	41 ·509
Diseases of the Abdominal viscera	Diarrhœa	44	15	97	41	61	25	106	44	167	69	4 ·858	41 ·317
	Dysenteria acuta et chronica	15	9	7	3								
	Obstipatio	2	1	2	0								
Diseases of the Lungs	Catarrhus	23	7	7	4	30	13	12	6	42	19	1 ·223	45 ·238
	Asthma	1	1	0	0								
	Pneumonia	2	3	3	1								
	Hœmoptysis	1	0	0	0								
	Phthisis pulmonalis	2	2	2	1								
	Dyspnœa	0	1	0	0								
do. of the Brain	Epilepsia	0	0	1	0	3	0	3	0	6	0	0 ·174	0 · 0
	Mania	1	0	0	0								
	Paralysis	2	0	2	0								
Eruptive fevers	Variola	89	12	43	2	94	12	45	2	139	14	4 ·044	10 ·071
	Varicella	5	0	2	0								
Dropsy	Anasarca	53	18	84	46	53	18	84	46	137	64	3 ·986	46 ·715
Rheumatic affections	Rheumatismus acutus et chronicus	58	2	65	10	58	2	65	10	123	12	3 ·578	9 ·756
Venereal affections	Syphilis primitiva	6	1	5	0	8	1	7	0	15	1	0 ·436	6 ·666
	Gonorrhœa	2	0	1	0								
	Hernia Humoralis	0	0	1	0								
Specific diseases	Atrophia	1	1	0	0	69	2	44	3	113	5	3 ·287	4 ·424
	Lepra	2	0	1	0								
	Beriberi	0	0	1	1								
	Dracunculus	64	1	38	1								
	Scrophula	1	0	3	1								
	Scorbutus	1	0	1	0								
Diseases of the eye	Morbi Oculorum	9	0	10	0	9	0	10	0	19	0	0 ·552	0 · 0
do. of the skin	„ Cutis	43	0	25	0	43	0	25	0	68	0	1 ·978	0 · 0
	Other diseases	230	3	274	6	230	3	274	6	504	9	14 ·663	1 ·785
	Total	829	118	914	142	829	118	914	142	1743	260	50 ·712	14 ·916

JAIL OF GUNTOOR.

No. 4.—*Table exhibiting the Number of Admissions and Deaths of the Prisoners under Trial from each Class of Diseases for* 10 *years.*

CLASSES.	DISEASES.	Years 1829 to 1838. Aggregate strength 1819 — 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each class of Diseases. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers	Febris ephemera	4	0	2	0								
	,, intermitt. quot	23	6	108	14	43	12	120	12	162	24	8 ·906	14 ·814
	,, tertiana	4	2	3	0								
	,, remittens	10	4	4	1								
	,, continua	1	0	3	0								
	Cholera	120	50	61	22	120	50	61	22	181	72	9 ·950	39 ·779
Diseases of the Abdominal viscera	Diarrhœa	69	27	163	102								
	Dysenteria acuta et chronica	13	6	14	8	85	33	177	110	262	143	14 ·403	54 ·580
	Obstipatio	3	0	0	0								
	Hepatitis acuta et chronica	0	0	1	1	0	0	1	1	1	1	0 ·054	100 ·0
Diseases of the Lungs	Catarrhus	12	5	16	9								
	Asthma	2	1	1	0								
	Phthisis pulmon	0	0	1	0	16	7	19	9	35	16	1 ·924	45 ·714
	Pneumonia	1	1	0	0								
	Hœmoptysis	0	0	1	0								
	Dyspnœa	1	0	0	0								
Diseases of the Brain	Paralysis	1	0	4	0								
	Amentia	1	1	0	0	7	1	4	0	11	1	0 ·604	9 ·090
	Mania	5	0	0	0								
Eruptive Fevers	Variola	129	23	120	16	130	23	122	16	252	39	13 ·853	15 ·476
	Varicella	1	0	2	0								
Dropsy	Anasarca	91	48	139	73	91	48	139	73	230	121	12 ·644	52 ·608
Rheumatic affections	Rheumat. acutus et chronicus	50	13	54	17	50	13	54	17	104	30	5 ·717	28 ·846
Venereal affections	Syphilis primitiva	1	0	2	0								
	Gonorrhœa	2	0	1	0	3	0	3	0	6	0	0 ·329	0 ·0
Specific diseases	Atrophia	0	0	0	0								
	Beriberi	0	0	0	0								
	Lepra	0	0	6	5								
	Dracunculus	20	0	19	0	31	1	30	6	61	7	3 ·353	11 ·475
	Scorbutus	11	1	5	1								
Diseases of the Eye	Morbi Oculorum	1	0	1	0	1	0	1	0	2	0	0 ·109	0 ·0
do. Skin	,, cutis	31	0	16	0	31	0	16	0	47	0	2 ·583	0 ·0
	Other diseases	63	6	58	10	63	6	58	10	121	16	6 ·652	13 ·223
	Total	670	194	805	276	670	194	805	276	1475	470	81 ·068	31 ·861

General results of the preceding tables of disease.

In this, as in the other jails in the division, a great increase of prisoners of sickness and of deaths, took place in 1833 and 1834, the famine having been very severely felt throughout the collectorate; in every street men, women and children were met with perishing from want, and the cattle nearly all died, and many persons committed crimes to gain admission into the jail, in order to be fed. During these years the average number of prisoners waiting for trial, was 1,573, the usual number not exceeding 35; and 1,199 admissions into hospital, with 429 deaths took place, being nearly four-fifths of all the admissions, and fully ten-elevenths, of all the mortality which has occurred amongst this class of prisoners during the ten years; the sickness it may also be remarked was confined almost exclusively to the years 1832, 33, 34 and 1835.

The number of convicted prisoners during these years was not increased in a similar ratio, the average being 520, about double the usual number; almost one half however of all the sickness occurred in this period, and nearly three-fourths of all the mortality, there being 832 out of the total admissions 1,743, and 197 out of 260, the total number of deaths.

Excluding these two years the annual average of sick to strength, during the remaining eight, is reduced from 50⅝ to 42½, and of deaths to sick, from 15 to 7 per cent; the annual number of admissions during these eight years averaging 114, and the annual deaths nearly 8.

Diseases of Prisoners.

The principal diseases met with in the jail are *intermittent* and *remittent fever*, the latter being occasionally severe and sometimes fatal, *diarrhœa* which is also occasionally fatal, especially in old subjects, *cholera*, *catarrh*, *phthisis* and *rheumatism*, *dracunculus* is also not unfrequent, and lastly *ulcers*, which form the greatest number of admissions in ordinary years.

The diseases which occurred in 1833 and 1834, were similar to those met with in the other jails, and described in the account of Nellore.

Fever. The fevers were generally of the intermittent type, which in the cases that terminated fatally rapidly assumed the remittent form, with determination to the head, death being preceded by coma.

Cholera. The cases of cholera were of the asphyxial character, this disease visited Guntoor in an epidemic form in 1833 and 1834; and it appeared also in 1832 and 1837, but not as an epidemic; the treatment consisted generally in the exhibition of an emetic in the first instance, followed with a dose of ten grains of calomel, which latter was repeated every half hour; and draughts composed of camphor grs. v., spirits of ammonia min. xx., tincture of lytta min. xv., and colocynth grs. x; were given every ten minutes or half an hour, according to circumstances, till the stools changed or the pulse rose; nitric acid blisters were applied to the nape of the neck and epigastrium; enemata of croton oil, with stimulating frictions and the application of hot sand were also resorted to, and tonics given during convalescence; under this mode of treatment the mortality it will be observed, was 41 per cent.

Diarrhœa. The fatal cases of diarrhœa for the most part occurred in old worn out men, and were attended in most instances, with œdema of the lower extremities and body generally; this disease was with difficulty, even in the cases which recovered, subdued by the most powerful astringents and tonics, the remedies which appeared to have been most relied on. Ulcération was found to exist in the colon, of the same character as that met with in the Nellore jail.

Anasarca. The cases of anasarca generally terminated by effusion into the chest and pericardium, producing much dyspnœa with irregularity of the heart's action; and diarrhœa, coming on at a late period of the disease, carried off many of the patients.

Small Pox. Small pox likewise prevailed during the famine, and but for the exertions of the medical officer, must have

caused great ravages; the means adopted by him to prevent its spreading were as follows; the patients were kept as distinct as the prisons allowed, from the other inmates, the apartments were white-washed, and frequently fumigated with the nitrous acid vapour, and the prisoners who bore no satisfactory marks of either small pox or cow pox, were immediately vaccinated. Vaccination was had recourse to in a great many cases after the eruptive fever appeared, and in others when it first showed itself, but in no single instance, in such cases, had it the slightest effect in modifying the course of the disease. Death occurred during the eruptive febrile stage in many of the cases of the confluent form, which assumed a typhoid character at an early period, and the patients died comatose, the eruption not being advanced beyond the papular stage; others again when the eruption became maturated sunk under the effects of colliquative diarrhœa;—363 cases of modified and natural small pox occurred at this time with 50 deaths, the average strength as already stated being 1,573. Nothing particular was observed in the mode of treatment employed.

NORTHERN DIVISION OF ARCOT.

Situation and extent.

The extensive tract of country included under this name, lies between the Nellore collectorate on the north, that of Chingleput on the east, Cuddapah on the west, and the southern division of Arcot on the south; it is of an irregular shape, its greatest extent from north to south being about 90 miles, and its average breadth between Chingleput and Cuddapah, from 40 to 50 miles; extending from about 12° 3", to 14° of North latitude; and from 70° 36", to 80° East longitude, and presents a surface of 5,571 square miles.

Aspect of the Country.

The aspect of the country towards the east and south, is level and low, but towards the west and north, it is rugged and hilly; and becomes even mountainous. The soil on the plains is for the most part sandy mixed with loam, and gravel; it is generally under cultivation, is very productive of rice, and other grains, and abounds with gardens, there being but little jungle; the soil in the valleys in the hilly part of the country which is also very productive is sandy and gravelly, and in some places clayey; the hills are composed principally of granite and sienite, ores of copper are found amongst the hills in Calastry, and iron ore is also abundant; the hills are almost all bare, and appear rugged and barren, the skirts of some of them however are covered with a stunted jungle. The direction of the principal hills is north and south, others run east and west, while others again in the lower parts of the country, are nearly detached or altogether isolated

Rivers.

The principal river is the Palar or milky river, which as before stated rises in Mysore, and flows eastward through this and the Chingleput collectorate nearly in a

straight line, passing close to the military stations of Vellore, Arcot and Wallajahbad, and to the town of Chingleput, running into the sea at Sadras. There are many smaller rivers in this district, as the "Poney" and "Soornamucky," &c. which are more or less taken advantage of for the purposes of irrigation, and for supplying tanks in their vicinity. There are several very large tanks as the Caverypauk which is about eight miles long and three broad, and numerous smaller ones.

Pulicat Lake. The large salt water lake, called the Pulicat lake, may be said to belong to this collectorate as it is situated at its north-east extremity, and forms a part of the boundary in that direction to the extent of 37 miles, which is about the length of the lake; it varies in breadth from two or three, to eleven miles; the communications with the sea are extremely narrow, but quite sufficient to allow the tide free entrance, so that the water is constantly changed; there are several large islands on the lake, on one of which the town of Pulicat is situated. A canal has been constructed from this lake to the northern extremity of Madras distant about 14 miles, which greatly facilitates the importation of charcoal, firewood, vegetables and other articles of daily consumption, to the Presidency markets.

Produce. Grains of every description are produced in great abundance, and cotton is grown extensively both for exportation and for the manufacture of country cloth, and besides the usual produce sent to the Madras market, a small trade is carried on to the eastward, from this collectorate.

Roads. The country is traversed by several tolerably good roads as the military roads to Bangalore, Trichinopoly and Cuddapah, from which there are branches to Cuddalore, Coimbatore, &c; the cross roads which are numerous, and in many places temporary, are only passable by bullocks.

Talooks. This collectorate like the preceding one is sub-

divided into districts or divisions, named talooks ; they are 26 in number, each of which contains a large village or town, generally of the same name, besides many smaller villages and hamlets ; the talooks vary much in size, extent and population, the latter ranging from 9000, to 72,000.

Population. A Census does not appear to have been taken of the entire collectorate, but of that portion for which it has been made, and which forms nearly two-thirds of the whole, the amount of population in 1837, was 5,19,987;—males 2,65,213, and females 2,54,774; and the number of houses amounted to 1,05,350.

The inhabitants are for the most part occupied in the cultivation of the ground, a few are employed in making cloth, manufacturing oil, &c. ; their mode of living and diet, does not vary from that of the other parts of this division.

The principal talooks with their towns are, Arcot, Vellore, Arnee Chittoor, Caverypauk, Trivullum Satghur and Trivattor; the population in each of which was computed to be as follows:—

	Males.	*Females.*	*Total.*	*Houses.*
Arcot	26,462	27,012	53,474	10,042
Vellore	36,311	35,754	72,065	14,882
Arnee	not	known	.....	.....
Chittoor	21,969	20,951	41,920	7,925
Caverypauk	24,055	23,864	48,819	9,278
Trivullum	16,867	15,758	32,625	6,349
Satghur	22,220	20,578	42,798	8,608
Trivattor	20,934	20,102	41,036	8,382

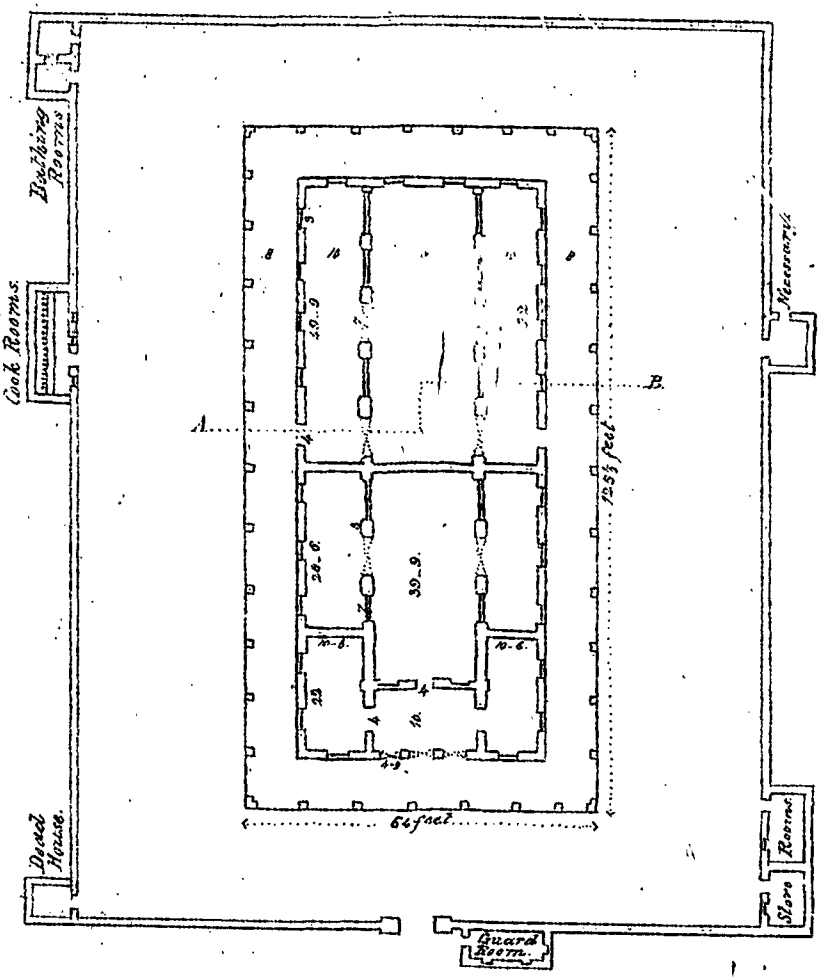
Climate: The climate does not differ materially from that of the other collectorates in this division, and where any peculiarity obtains, it will be noticed in the description of the civil and military stations of the district.

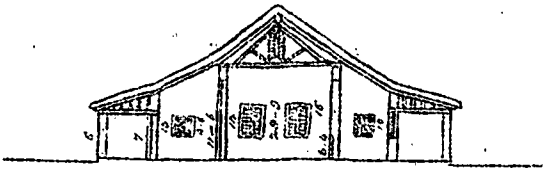
ARCOT.

This town formerly the Mahomedan capital of the Carnatic, was occupied first by that people in 1716, the mountain fortress of Gingee, near Pondicherry, their original stronghold having been found so extremely unhealthy as to oblige them to canton on the plains of Arcot.

Cantonment. The Cantonment as it now exists, and also the

NATIVE HOSPITAL at ARCOT.





Section through A. B.

Lith.d by B.C. Regel.

. . dras Lith. Press.

town are of modern date, the inhabitants however are still chiefly Mahomedans. Until the year 1829 it formed the head quarters of the Centre Division of the army, but is at present exclusively a Cavalry cantonment. It lies about 68 miles west south-west from Madras, in latitude 12° 52′ North, and longitude 79° 29′ East; it is situated upon high ground sloping towards the left bank of the Palar river which flows at the distance of 900 yards in its front.

The country around is open but irregular, and with the exception of two or three inconsiderable bare hills consisting of granite, there is no high land near; the nearest hills of any importance, being an extensive range to the south west of the cantonment, distant seven miles; they also consist of granite in a decaying state, appearing rugged and rocky, and for the most part bare.

The soil in the cantonment and surrounding neighbourhood consists chiefly of a barren whitish gravel, except on the south-east and south-west sides where there are tracts of low paddy ground of some extent, running parallel to the river, and irrigated by artificial channels from it; there are also several small patches of rice ground in the vicinity, watered from tanks. Besides these there is but little vegetation for several miles round with the exception of an extensive strip which commences about half a mile to the south-west, and runs one mile along the bank of the river, having a breadth of about 400 yards, this is thickly planted with mango, tamarind, date, guava and a variety of other trees; and is known by the name of the "nine lac" garden, from the number of trees it is said to contain; there is no jungle within many miles.

River Palar. The bed of the river in this neighbourhood is sandy, and its waters do not deposit any slime or mud, it is fully 500 yards in breadth in the monsoon when full, whilst during the greater part of the year, it is merely a small stream and its bed is sometimes altogether dry.

The water is good and in the dry season when it becomes scarce in wells and tanks, which sometimes happens, pits are dug in the bed of the river from which a supply is always procurable.

Cantonment. There is accommodation in the cantonment for three regiments, one of European and two of Native cavalry. The lines for the horses are placed parallel to each other, and considerably in advance of their centre, is an extensive barrack for Europeans, built of brick and chunam, with a tiled pent roof, the floors are laid with brick and the whole is surrounded by a wall. Immediately in front of the lines of each regiment is a place of arms, a guard-room and a range of stables for sick horses; and about 400 yards to the rear are the hospitals three in number, which are commodious, advantageously situated, well ventilated and built of the best materials; behind these again are the granaries, solitary cells and an extensive well-built lock*-hospital surrounded by a wall. The public buildings in this cantonment are all well constructed, large and airy, particularly the hospitals which it may be remarked are superior to any native hospitals in this presidency. A plan of one of them is annexed.

In the rear of the centre lines stands a neat protestant chapel.

Some of the officers houses are placed in the rear and others in front of the lines, the former which are on high open ground are airy and dry, but the latter being comparatively low and somewhat confined by trees, are considered less healthy.

Pettah. The pettah or village, which is situated between the cantonment and the river, is in some parts low and confined, but is kept tolerably clean; in it is the principal bazaar, and on its western side are the huts or the lines of the sepoys of one of the cavalry corps, those of the other native regiment, being placed on the right of the canton-

* Not now in use.

ment; the lines are constructed in streets, corresponding with the number of troops or companies. The hindoos have a street appropriated to themselves, so also have the trumpeters and farriers, who are all indo-britons.

Healthiness of the Station

Arcot is generally reckoned to be a healthy station, there is nothing apparently objectionable in its locality, except it be the low site of the western part of the pettah, and a portion of the lines in that direction; some of the officers bungalows in front of the cantonment, are also low and somewhat confined by having too many trees round them, as already mentioned, and it is worthy remarking, that the people residing in these parts of the cantonment have always suffered most from cholera, when it has visited the station.

It is found as might be expected from the preceding description, that febrile diseases met with here, are not of a malarious origin or nature, being generally produced by cold or vicissitudes of climate, and although frequently assuming the intermittent or remittent types, they are generally cured without the aid of quinine. The native cavalry who are chiefly composed of Mahomedans of the better classes are generally strong, muscular and well made men, and febrile diseases amongst them are observed to be of a more acute character, than in other native troops, being likewise more frequently complicated with inflammatory local affections. At this station the head or chest are the parts chiefly implicated, in few cases however, have the local complications been of a severe or fatal nature.

During the last ten years not more than two native regiments have been stationed at Arcot at any one time, and frequently there has been only one; and no European cavalry have been quartered at the station for a number of years past.

The following table will shew the nature of the prevailing diseases. The mortality is very trifling, and excluding cholera, which disease visited the place in 1833 and 37, it is very small indeed.

ARCOT.

No. 5.—*Table exhibiting the Number of Admissions and Deaths from principal Diseases for* 10 *years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 7,965. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each Class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total deaths from each class.	Average per centage of sick to Strength.	Average per centage of deaths to sick.
Fevers	Febris ephemera	54	0	107	0								
	,, intermitt quot.	185	1	391	2	511	4	714	4	1225	8	15 ·879	0 ·653
	,, tertiana	117	0	9	0								
	,, remittens	149	2	207	2								
	,, continua	6	1	0	0								
	Cholera	56	28	35	10	56	28	35	10	91	38	1 ·142	41 ·758
Diseases of the Abdominal viscera	Diarrhœa	76	0	61	2								
	Dysenteria acuta et chronica	30	1	40	0	106	1	101	2	207	3	2 ·598	1 ·449
	Hepatitis acuta et chronica	1	0	3	0	1	0	3	0	4	0	0 ·050	0 ·0
Do. of the Lungs	Catarrhus	20	0	22	1								
	Asthma	3	0	7	2								
	Phthisis pulmonalis	1	0	3	1								
	Hœmoptysis	0	0	0	0	30	2	38	5	68	7	0 ·853	10 ·294
	Pneumonia	6	2	2	1								
	Dyspnœa	0	0	4	0								
Rheumatic affections	Rheumatismus acutus et chronicus	146	1	115	1	146	1	115	1	261	2	3 ·276	0 ·766
	Other diseases	1493	6	1676	5	1493	6	1676	5	3169	11	39 ·786	0 ·347
	Total	2343	42	2682	27	2343	42	2682	27	5025	69	63 ·088	1 ·373

Remarks on the table of diseases.

The class of fevers it will be seen forms a fourth part of all the admissions, and has occasioned an eighth of the mortality exhibited in the foregoing tables, the most severe cases and some of the deaths, it should be observed, occurred during the march of regiments to this place, or even whilst they were at other stations, particularly Bangalore and Secunderabad.

Of cholera 91 cases have occurred, with 38 deaths, being considerably more than one half of all the mortality. As already observed this disease broke out in 1833 and 37, and in both instances its character was of the low type; the treatment consisted of large doses of laudanum and stimulants, (particularly camphor dissolved in brandy, spiritus ætheris nitrici, and spiritus ammoniæ aromaticus,) with calomel and

opium; warm applications externally, and sinapisms or blisters to the epigastrium.

Bowel complaints form but a small number of the admissions, and have caused but few deaths; dysentery has been generally very mild, and was treated by some of the medical officers with nitric acid and laudanum, preceded by a dose of castor oil.

Hepatic diseases have but seldom occurred; and very few admissions have taken place from the class of chest affections, the table shews the nature of those which have happened.

Rheumatic affections are not unfrequent, but although the greatest number of the cases are returned as "acute," they have not, except in a few instances, been severe; the form has generally been articular, and the disease has readily yielded to local applications, with antimonials or Dover's powder. In one instance only in the entire number (241) of acute cases, has it been remarked that metastasis took place; this character of rheumatism so frequent in Europe is rarely observed in India, and amongst natives it may be said never to occur, in Europeans likewise it is seldom seen except in young men recently arrived who have generally contracted the disease on board ship. In the case above alluded to, the metastasis did not affect any of the internal organs, but the disease shifted from one joint to another. It may be worth while to remark that the cause of death in the two fatal cases recorded, was quite unconnected with the rheumatic affection, in both instances death occurred from fever of a remittent type, supervening in constitutions considerably worn out by previous disease; both these patients died comatose.

In the class of "other diseases" (which in the table will be observed to amount nearly to three-fourths of all the admissions, or 3,169 out of 5,025,) are included 1,156 of contusions, from bites, kicks and falls from horses, and nine cases of fracture; the remainder are made up of boils, ulcers and other trifling complaints which do not for the most part appear on the returns of Infantry regiments, but which as

incapacitating mounted soldiers from the performance of their duty, are received into hospital, and such cases swell greatly the amount of sick in the cavalry returns. Almost all the deaths in this class of disease have been caused by accidents, such as falls from horses, &c.

VELLORE.

Cantonment of Vellore. The cantonment of Vellore lies 12 miles west of Arcot, and 80 miles in a westerly direction from Madras, and is occupied solely by native troops.

In former days it was a post of great importance, as it commanded the main-road leading to the upper Carnatic, but the occupation of Mysore by the British has rendered it now of little value in this respect.

Fort. The fort is situated three quarters of a mile from the foot of a high range of rocky hills, which are naked and rough, and form the eastern boundary of an extensive plain surrounded by hills, called the Ambore Valley, the skirts of these hills are planted, but not thickly, with palm and date trees.

The fort is capacious, and besides the hospitals, barracks, magazines and quarters for officers, it contains several other buildings which are occupied by the families of the late Tippoo Sultan, and the ex-king of Kandy.

The ramparts are high and broad, strongly built and are provided with bastions and towers at short distances from each other; the whole is surrounded by a ditch of great breadth, having at all times a considerable depth of water, which is generally very clear and free from grass and weeds.

Village. The town or village of Vellore lies between the fort and the range of hills on the eastern side of the

valley, it is clean and tolerably airy, and contains an extensive well supplied bazaar ; to the north of the village are the houses of the officers, placed in a double row, with the military road to Arnee running between them.

Places of Arms. The places of arms are situated about a quarter of a mile to the north of the fort, and close to them are the lines of the sepoys, a great many of whom however reside in the pettah intermixed with the inhabitants of the place.

The site of the fort and pettah of Vellore is sufficiently raised above the level of the flat ground in the vicinity, to prevent the lodgement of water.

Soil, produce, and salubrity of Station. The soil in the neighbourhood and throughout the valley, is a rich dark brown mould which produces a constant succession of luxuriant crops, being watered by the Palar river which runs through its whole extent, (passing the fort at a distance of half a mile,) and by springs which are numerous at the bottom of the contiguous hills. Rice and tobacco appear to form a large proportion of the cultivation in this valley, there is besides much natural vegetation, and numbers of trees both in and around the village, but particularly near the officers houses where they are too numerous, considering how little these localities are raised above the adjoining rice fields ; though these plantations must impede the free circulation of air, the access of which from the eastward is obstructed to a considerable degree by the high range of hills, their presence does not appear to be productive of any pernicious effect, for it is generally believed that although this station is a few degrees hotter than St. Thomas's Mount, Poonamallee or Wallajahbad, it is surpassed in salubrity by none in the division; and as far as regards the native constitution this is fully subtantiated by the fact, that regiments arriving from unhealthy malarious stations in a weakly state, have been observed to improve in health in a very surprising manner at this place, this was exemplified in the 9th Regiment Na-

tive Infantry in 1834, the men of which suffered severely from fever some time previously, in an unhealthy district in Goorg; and in the 40th Regiment Native Infantry in 1835, which also suffered to a great extent from fever, while stationed at Mangalore, and when marching through the Wynaad jungle.

Native Troops. The number of troops stationed here have generally been two, and sometimes three regiments; detachments however to the neighbouring civil stations, Chittoor, Chingleput and Cuddalore, are occasionally furnished from these corps, the sick of which are included in the returns from the Head Quarters of the regiment, the number and extent of these detachments during the last 10 years, have not however been so great as to interfere with the general results shown in the table which is appended.

Hospital. The Hospital is situated in the fort, and is constructed in the form of an oblong quadrangle, enclosing an area of 81 yards by 15, it is pent roofed and tiled, well ventilated and generally dry, the floor being well raised, but the roof is rather low and there is no verandah. This structure is divided into six large wards and four smaller rooms, these latter serve for dispensaries and surgeries, and four of the former are set apart one for the sick of each of the Native regiments, and one for the details of the station, they afford accommodation to upwards of 50 patients each.

VELLORE.

No. 6—*Table exhibiting the number of Admissions, and Deaths, from principal Diseases for* 10 *years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 12,133				Admissions and Deaths from each class of disease.				Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.		Average percentage of deaths to sick.	
		1st Half.		2d Half.		1st Half.		2d Half.							
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.						
Fevers	Febris ephemera	127	0	284	1	628	13	869	14	1497	27	12	·040	1	·803
	,, intermittens.	456	11	516	9										
	,, tertiana	10	0	13	0										
	,, remittens	16	2	6	1										
	,, continua	19	0	50	3										
Cholera		33	19	11	4	33	19	11	4	44	23	0	·353	52	·272
Diseases of the abdominal viscera.	Diarrhœa	49	5	42	2	68	6	89	6	137	12	1	·101	8	·759
	Dysenteria Acuta et Chronica	19	1	27	4										
	Hepatitis Acuta et Chronica	2	0	3	1	2	0	3	1	5	1	0	·040	20	·0
Diseases of the Lungs & Heart.	Catarrhus	10	1	17	1	23	3	42	5	65	8	0	·532	12	·307
	Asthma	4	1	9	1										
	Phthisis pulmonalis	2	0	4	2										
	Hœmoptysis	1	1	1	0										
	Pneumonia	2	0	5	0										
	Dyspnœa	4	0	6	1										
Rheumatic affections.	Rheumatismus acutus et chronicus	375	4	359	2	375	4	359	2	734	6	5	·903	0	·817
Other diseases		1332	19	1449	15	1332	19	1449	15	2781	34	22	·367	1	·222
Total		2461	61	2802	47	2461	64	2802	47	5263	111	42	·330	2	·109

ARNEE.

Arnee is situated about 76 miles south-west from Madras, and about 20 miles south of Arcot. It is elevated about 400 feet above the level of the sea, and is somewhat higher than the surrounding plains.

It was formerly a strong fortress, and during Hyder's invasion of the Carnatic in 1782, his principal magazines were deposited in this place.

The public buildings, the barracks, hospital, officers' quarters, &c. are placed within its now decayed and dilapidated ramparts. It is a station for European troops and has only been occasionally occupied for some years past, serving as a temporary Depôt for corps proceeding up country, or pre-

vious to embarkation from the Presidency; in 1840 it was garrisoned by the 2nd Madras European regiment, which corps was embodied there.

Barracks. Immediately facing the parade ground are two bomb-proof ranges of buildings, forming the officers quarters, and behind these and about 300 yards distant, are the barracks calculated to accommodate one European regiment, which are also bomb-proofs, spacious and strongly built, they form three sides of a square, the fourth being occupied by a wall and the gateway; not far from

Hospital. them is the hospital, a commodious and substantial tiled building, in the form of an oblong square, it has a verandah on its inner side towards the area, and the entrance is on the north side. The southern side measuring 217 feet, with half of the east and west sides, form one continuous ward without partitions, its length being 365 feet; the remainder of the building is occupied on one side by the dispensary, the medical subordinates, and the hospital serjeant's quarters and a dead-room; the other by the female ward, store rooms and cook rooms. The floors are well raised, dry and made of brick coated with chunam. The middle part of the large ward is airy and well ventilated, but the ends are rather close, and require additional windows.

Situation. The ground upon which Arnee stands is somewhat low and flat, but water does not lodge on it even in the monsoon; a small river, which is partly fed by springs and affords a constant supply of good water, runs within a quarter of a mile of the fort.

The country around is open, the nearest hills which consist of granite and syenite, being six miles distant, and with the exception of a few straggling palmira trees, there is but little natural vegetation, small patches of stunted jungle only, appearing here and there. There are but few rice fields in the neighbourhood, the greater part of the cultivation around being dry grain. The soil of the plain extending to the neighbouring hills is chiefly composed of disintegrated rock

of primitive formation, mixed with sand; and in low situations it becomes loamy or clayey. In many places it contains much saline impregnation, the surface becoming covered with a white efflorescence in the dry season. This is found to consist chiefly of impure salts of soda.

The hills are known to be feverish, but the malaria arising from them does not affect Arnee, which in respect to climate must be considered a healthy, though an extremely hot station.

Health of the Station.

It has been observed that the troops, as well as the inhabitants of the village distant 200 yards, have generally enjoyed a fair proportion of health, although H. M. 41st regiment suffered severely from dysentery, at this station, in 1829. The constitutions of the men of that regiment were however greatly debilitated, and had acquired in many instances a scorbutic taint by their long residence in the wet climate of the Burmese territories, from whence they had arrived that year. As already observed this station has been only occasionally occupied for many years past, the usual table of disease cannot therefore be given, the following although comprising only two years is thought worthy of record, as bearing upon the question of the salubrity of the station.

ARNEE.

No. 7.—*Table exhibiting the Number of Admissions and Deaths from principal Diseases in Her Majesty's 41st Regiment, during the years 1829 and 1835.*

CLASSES.	DISEASES.	1829 and 1835. Aggregate Strength 1,386. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each Class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd	Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers	Febris ephemera	0	0	0	0								
	,, intermit: quot	29	1	43	0								
	,, tertian	0	0	3	0	146	2	163	2	339	4	22 ·294	1 ·294
	,, remittens	40	1	29	0								
	,, continua	77	0	88	2								
	Cholera	12	3	11	0	12	3	11	0	23	3	1 ·659	13 ·043
Diseases of the Abdominal viscera	Diarrhœa	56	1	30	0								
	Dysenteria acuta et chronica	102	17	124	11	158	18	154	11	312	29	22 ·510	9 ·294
	Hepatitis acuta et chronica	65	3	33	3	65	3	33	3	98	6	7 ·070	6 ·122
Diseases of the Lungs	Catarrhus	18	0	6	1								
	Asthma	1	0	0	0								
	Phthisis pulmonalis	0	0	2	0								
	Hœmoptysis	0	0	0	0								
	Pleuritis	0	0	0	0	34	0	23	2	57	2	4 ·112	3 ·508
	Pneumonia	15	0	13	1								
	Carditis	0	0	0	0								
	Palpitatio	0	0	0	0								
	Dyspnœa	0	0	2	0								
Rheumatic affections	Rheumatism: acutus et chronicus	51	0	30	0	51	0	30	0	81	0	5 ·844	0 ·0
	Other diseases	486	4	442	3	486	4	442	3	928	7	66 ·955	0 ·754
	Total	952	30	856	21	952	30	856	21	1808	51	130 ·447	2 ·820

N. B.—In	Strength.	Admissions.	Deaths.	Dysentry.	Deaths.
1829	714	1039	32	197	21
1835	672	769	22	29	7

During a period of 3 years and 2 months, from 1828 to 1832, out of a numerical strength of 2,699 European troops at Arnee, there were 3,429 admissions with 86 deaths, giving a percentage of 127·047 admissions to strength, and 3·186 deaths.

In the month of May 1840, a severe epidemic visitation of cholera was experienced by the 2nd European regiment, the weather for sometime previous had been unusually sultry, and the men were suffering from head complaints, thoracic congestion and palpitations, with great langour and depression of spirits; on the 22d of the month a heavy squall of wind, accompanied by rain from the north-west suddenly occurred, causing the thermometer to fall 10 degrees, and on the evening of the 23d cholera, in its most ag-

gravated form broke out, and in the course of that night and the morning of the 24th, 20 men were admitted with the disease, of whom 14 died; between that time and the 30th of the month, when the disease disappeared as suddenly as it arose, 41 cases occurred with 19 deaths, exclusive of upwards of 100 cases of choleroid-diarrhœa. On the 31st of May and 1st June, after a continuance of sultry weather, there was a heavy fall of rain when the disease ceased. It should be remarked, that the ditch of the fort contained much putrid water and filth, from which at the time the exhalations were highly offensive, and that diarrhœa prevailed as an epidemic during the month of April.

The remedy found most efficacious during the epidemic was the cold *douche* applied to the head, which in many cases appeared to be effectual in favouring re-action.

CHITTOOR.

Description of Chittoor and its vicinity.

The town of Chittoor is situated in the western part of the zillah of the same name, the surrounding country being hilly, and in parts even mountainous, it lies in a valley of irregular shape, said to be 1,100 feet above the marine surface, enclosed on all sides by hills except on the east; the hills generally are rugged, barren and rocky, composed of a coarse granite, gneiss and grey wacke, all more or less in a decaying state, but the valleys between them are very productive. The hills immediately around Chittoor are of the same description, being veined occasionally with iron ore, they are quite bare except towards the base, which is surrounded by a belt of stunted trees and shrubs.

River Poony.

Along the centre of the valley runs a river called the "Poony," which joins the Palar near Wallajahbad, during the monsoon season it is 400 yards in breadth, but in

the hot months it is merely a bed of dry sand, with a small rivulet running through it; its water is taken advantage of for the irrigation of the land in the vicinity, and several tanks are also supplied by it; the banks are muddy and slimy in some places, and emit very offensive effluvia during the beginning of the hot season.

Soil. The soil on the declivity of the hills and in the low grounds, is composed of the debris or detritus of the loftier parts, interspersed here and there with large masses of rock; in some places it is of considerable depth, in others shallow, sandy and gravelly, and mixed with argillaceous earth or blue clay, whilst in other parts again, it contains much carbonate or subcarbonate of iron.

The whole of the lower grounds of the valley are under rice cultivation, and dry grains are grown near the hills; the former situations are watered, as already stated, by the river and by tanks, which become marshy and very offensive when partially dried up.

Town and Fort. The town and fort of Chittoor, are on the south side of the river, distant 100 yards; the former is kept in a very imperfect state of cleanliness, and at the west end of the town close to the fort, are offensive ditches of stagnant water, the *fossé* surrounding the fort being also in a most obnoxious state; the rice fields reach close to the fort and town, and there is besides much natural vegetation, such as trees and shrubs, around the town, fort and the officers houses.

On a spot gently elevated and about half a mile distant, stands the jail, and between it and the town are the zillah courts, and courts of appeal, all excellent and suitable buildings.

Residences of Europeans. The Europeans both civil and military reside in commodious houses at some distance

from the town, on its south-east and south-west sides, in compounds thickly planted with trees.

The sepoys of the detachment stationed at Chittoor, amounting to between 150 and 200 men, have no separate lines but live in the village.

Climate. Chittoor which is about 70 miles from the sea in a direct line, is under the influence of the north east monsoon, but the sea breeze does not reach it with any regularity; the most prevalent winds are the north east and south west, and it is liable to calms, and to sudden squalls from all quarters, modified by the course and direction of the different ghauts or passes through the hills, and by the powerful radiation of heat, from rocky and sandy surfaces.

Thermometric range. The thermometer has been observed occasionally to rise to 140° of Fahrenheit, when exposed to the rays of the sun; but the annual range in the shade is from 56° to 100°; the greatest diurnal variation observed, has been 20°, and the common daily range from 8° to 10°; the mean of the annual heat being about 80°, which corresponds with the theoretical calculation of the temperature of the 14th degree of latitude.

Malaria, sources of abundant. It will be observed from what has already been stated that the sources of malaria abound at Chittoor, and the numerous admissions from intermittent and remittent fevers exhibited in the appended tables, will therefore not excite surprize; diarrhœa and dysentery are also endemial being particularly frequent during the monsoons, and after heavy falls of rain; bad ulcers are also of frequent occurrence; these several diseases affect the inhabitants of the place equally with the prisoners.

With a view to diminishing the extent of slimy surface exposed on the drying up of the tanks, they might be much reduced in size and deepened; the ditches near the

town and round the fort might be drained into the river and filled up; and a marshy situation not far from the large jail is also capable of being drained. The cultivation of rice should be prohibited within a certain distance of the town, and the natural vegetation thinned; so powerful are the exhalations from the tanks and ditches at times, particularly early in the morning and after sunset, that they produce in those exposed to their influence, nausea and vomiting, with a disagreeable taste in the mouth.

Health of European Residents.

The Europeans resident at Chittoor have generally enjoyed good health, they live in houses considerably raised from the ground, and are in a great measure removed from the action of the common exciting causes of fever, they are however so few in number that no general conclusions can be drawn as to the effects of the climate upon the European constitution.

Palmanair Hills, description of

As connected with Chittoor and situated in the same district, Palmanair may be briefly noticed, being an occasional place of retreat for Europeans in the warmer months of the year; it lies nearly twenty-four miles due west from Chittoor, where the country becomes mountainous, and has been calculated to be 2,312 feet above the level of the sea, and consequently 1,200 feet higher than Chittoor. The temperature is 7° or 8° less, and the nights are always pleasantly cool at Palmanair, admitting of refreshing and undisturbed repose, and the coolness of the mornings invites to exercise.

The mountains are of the same structure, and the soil in the valley and indeed throughout the whole district, is of the same description as at Chittoor, i. e. sandy and gravelly, with loose craggy rocks dispersed here and there.

There are several tanks, but no morasses of any extent in the neighbourhood.

The jungle which passes north of Vellore, approaches on the eastern side to within a short distance of Palmanair,

and occupies a very irregular surface, varying in breadth from one to four miles.

Climate of Palmanair. Palmanair appears to be healthy, no particular disease having been observed to originate there, but it may be remarked, the bungalows are not far from the west-side of the jungle alluded to, and whether the wind during the north-east monsoon blowing over it, would produce malarious disease cannot be ascertained, as during that period of the year no Europeans reside there; and this point with regard to the natives of the place, has not been determined. It is highly probable however, that it would prove unhealthy from October till March.

Before entering more fully into the nature of the diseases met with at Chittoor, it will be proper to give a short description of the site and construction of the jails and hospital.

Jails. There are three separate buildings occupied by the prisoners, viz. the principal jail, where male prisoners of every class are confined, a prison for females, and an hospital.

The first is situated on an elevated airy spot and sandy soil, half a mile from the town, rice is cultivated close up to it, and on the left there is a considerable swamp; it is an extensive structure consisting of three parallel ranges, the two external measuring 172 feet by 37, and the centre 130 feet by 23, they stand 8 yards apart from each other, and are well constructed brick buildings, pent roofed and tiled; they are tolerably well ventilated but not provided with verandahs, the floors are dry being well raised from the ground, and the height of the walls is 9½ feet.

The two outer ranges are subdivided into small apartments by walls only 6 feet high, and the middle one is divided into two apartments which, unless when the jail is much crowded, are used only as workshops, for weaving, &c.

A trench or fosse of about 8 feet wide by 4½ in depth, lined with masonry, encircles these buildings, outside which at the distance of 21 feet, is a substantial wall 11 feet high; the wall is provided with a watch tower at each corner, and has a gateway on the western face, on each side of which are enclosed sheds, to shelter the sepoys and peons on guard, and the prisoners when employed in cleaning rice.

The jail allotted to the female prisoners stands about 100 yards distant, it is a mud building forming two parallel ranges, each 67 feet long, 16 broad, and 28 feet apart, connected by a wall at either end; one of these buildings is used as a paper manufactory, and the other as a place of confinement, the floors are sufficiently raised and perfectly dry.

The jails which were erected in 1809 are in good repair, and can accommodate 800 prisoners.

Hospital, situation of, The hospital is situated about 200 yards from the large jail, it is a substantial terraced building, originally designed for a provincial lunatic asylum, it forms three sides of a quadrangle and is subdivided into seven wards, and a dispensary; all the wards are well ventilated, a terraced verandah being built on the outer face; six of the wards are 22 feet by 9, and 9 feet high, the seventh is of larger dimensions, the whole having accommodation for 40 patients; the floors are laid with brick chunamed over, well raised and dry; cook rooms and other offices are attached, and there is a well of good water within the hospital enclosure.

Diet, labour, &c. For the system of dieting and clothing the prisoners, see table at the end of the report for this division.

Diseases. Fevers and bowel complaints are said to be more severe and fatal among the inhabitants of the place, than the prisoners, which may be attributed to the latter being better housed and fed. It has been observed also within the last two or three years, that fever has been less preva-

lent than for several years previous thereto, and that dysentery and diarrhœa have been on the increase; no cause has been assigned, nor can any satisfactory explanation be given, to account for this circumstance.

Famine of 1833-34 only partially felt.

This district suffered comparatively in a moderate degree from the famine of 1833 and 34, and the increase in the number of prisoners, sickness and death, which then occurred, was much less than in the jails in the low country. The crops did not entirely fail throughout the hilly country, there being numerous natural springs which were not wholly dried up, but although absolute want and starvation did not exist, great scarcity prevailed, and led to a considerable increase of crime.

JAIL OF CHITTOOR.

No. 8.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Disease for* 10 *years.*

CLASSES	DISEASES.	From 1829 to 1838. Aggregate strength 3,488. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half Ad.	2d Half Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.		Average percentage of deaths to sick.	
Fevers	Febris ephemera	51	0	64	0										
	„ intermit. quot	230	3	314	10										
	„ tertiana	1	0	15	0	489	7	698	12	1187	19	34	·030	1	·600
	„ remittens	205	3	301	1										
	„ continua	2	1	4	1										
	Cholera	29	13	16	13	29	13	16	13	45	26	1	·290	57	·777
Diseases of the abdominal viscera	Diarrhœa	84	11	128	18										
	Dysenteria acuta et chronica	52	11	82	17	148	22	230	38	378	60	10	·837	15	·873
	Obstipatio	12	0	20	3										
	Hepatitis acuta et chronica	2	2	0	0	2	2	0	0	2	2	0	·057	100	·0
Diseases of the Lungs	Catarrhus	3	0	4	0										
	Asthma	14	3	5	0										
	Pneumonia	4	4	6	4	21	7	17	5	38	19	1	·099	31	·578
	Phthisis pulmonalis	0	0	2	1										
Diseases of the Brain	Apoplexia	0	0	1	1										
	Paralysis	3	0	3	2	7	2	8	3	15	5	0	·430	3	·333
	Phrenitis	4	2	0	0										
	Mania	0	0	4	0										
Eruptive fevers	Variola	2	1	3	0										
	Varicella	39	0	5	0	51	1	9	0	60	1	1	·720	1	·666
	Erysipelas	0	0	1	0										
	Rubeola	10	0	0	0										
Dropsy	Anasarca	35	14	21	11	35	14	21	11	56	25	1	·605	44	·642
Rheumatic affections	Rheumat. acutus et chronicus	165	3	116	3	165	3	116	3	281	6	8	·056	2	·135
Venereal affections	Syphilis primitiva	3	0	5	0										
	Gonorrhœa	3	0	3	0	9	0	11	0	20	0	0	·573	0	·0
	Hernia humoral.	1	0	3	0										
	Strictura urethræ	2	0	0	0										
Specific diseases	Atrophia	3	3	8	7										
	Lepra	2	1	1	1										
	Dracunculus	0	0	0	0										
	Scrophula	1	0	0	0	6	4	18	10	24	14	0	·688	58	·333
	Ulcus phagedenicum	0	0	9	2										
Diseases of the Eye	Morbi Oculorum	22	1	32	0	22	1	32	0	54	1	1	·548	1	·851
Do. of the Skin	„ Cutis	100	2	81	1	100	2	81	1	181	3	5	·189	1	·657
	Other diseases	836	11	957	20	836	11	957	20	1793	31	51	·404	1	·728
	Total	1920	89	2214	116	1920	89	2214	116	4134	205	118	·520	4	·953

JAIL OF CHITTOOR.

No. 9.—*Table exhibiting the Number of Admissons and Deaths of the Prisoners under Trial, from each Class of Disease for* 10 *years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 1,436. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers	Febris ephemera	3	0	3	0								
	,, intermittquot	132	4	118	3								
	,, tertiana	0	0	0	0	138	4	126	3	264	7	18 ·461	2 ·651
	,, remittens	2	0	4	0								
	,, continua	1	0	1	0								
	Cholera	31	23	24	17	31	23	24	17	55	40	3 ·846	72 ·727
Diseases of the abdominal viscera.	Diarrhœa	16	6	15	6								
	Dysenteria acuta et chronica.	21	5	35	11	62	11	73	21	135	32	9 ·440	23 ·703
	Obstipatio	25	0	23	4								
	Hepatitis acuta et chronica	2	1	1	1	2	1	1	1	3	2	0 ·209	66 ·666
Diseases of the Lungs & Heart.	Catarrhus	2	1	3	0								
	Pneumonia	3	2	3	3								
	Carditis	1	0	1	1	7	3	9	6	16	9	1 ·118	56 ·250
	Phthisis pulmonalis	1	0	2	2								
Diseases of the Brain.	Apoplexia	1	1	0	0								
	Epilepsia	1	0	1	0								
	Paralysis	0	0	1	0	4	1	2	0	6	1	0 ·419	16 ·666
	Amentia	1	0	0	0								
	Mania	1	0	0	0								
Eruptive fevers.	Variola	0	0	2	2								
	Varicella	0	0	11	0	1	1	13	2	14	3	0 ·979	21 ·419
	Erysipelas	1	1	0	0								
Dropsies	Anasarca	5	4	15	8	5	4	16	9	21	13	1 ·468	61 ·904
	Ascites	0	0	1	1								
Rheumatic affections.	Rheumat: acutus et chronicus.	4	0	3	1	4	0	3	1	7	1	0 ·489	14 ·285
Venereal affections.	Syphilis primitiva	3	0	4	0								
	Gonorrhœa	1	0	0	0	5	0	4	0	9	0	0 ·629	0.
	Hernia humoralis	1	0	0	0								
Specific diseases.	Atrophia	0	0	5	5								
	Lepra	2	0	0	0								
	Dracunculus	0	0	0	0	2	0	10	6	12	6	0 ·839	50 ·0
	Ulcus phagedenicum	0	0	5	1								
Diseases of the Eye.	Morbi oculorum	5	0	9	0	5	0	9	0	14	0	0 ·979	0.
do. Skin	,, Cutis	115	0	116	0	115	0	116	0	231	0	16 ·153	0
	Other diseases	84	10	122	6	84	10	122	6	206	16	14 ·405	7 ·767
	Total	465	58	528	72	465	58	528	72	993	130	69 ·440	13 ·091

Remarks on the foregoing tables of disease.

The average number of convicted prisoners was increased from 300, the usual strength, to 550, and the number of those under trial during the two years of famine, from 95 the usual average, to 334; the amount of sickness and death was however proportionally greater than the increase of the strength. In the convicted 1128 admissions, with 91 deaths took place, being more than a fourth part of all the sickness during the ten years ending in 1838, and somewhat less than one half of the total mortality in the same period; while among those waiting for trial, 438 admissions with 91 deaths occurred, being nearly one half of all the admissions from this class of prisoners, and five-sevenths of all the deaths. The average annual per centage of sick to strength, and of deaths to sick treated, is given in the tables for both classes, and excluding the two years adverted to, is as follows for the remaining eight; amongst the convicted the average of sick to strength is 125 per cent, and of deaths to sick treated somewhat less than 4 per cent; among those under trial the average of sick to strength is 73 per cent, and the deaths to sick treated, are reduced to 7 per cent. The most numerous and fatal diseases during these two years, were *cholera, diarrhœa, dysentery* and *anasarca.*

Fever.

The type of fever is generally what has been termed the bilious intermittent and remittent, attended with much functional derangement of the chylopoetic viscera, particularly of the stomach and liver, the latter being especially implicated in the hot season; and in addition to much nausea, bilious vomiting and headache, the conjunctivæ, tongue and occasionally the surface of the body, assume a yellowish colour.

The tendency to relapse is found to be great, and in many instances anasarca and diarrhœa of a fatal character have followed the third or fourth attack, when occurring within a few consecutive months. In the treatment of both forms of the disease, it has been usual to

exhibit an emetic in the first instance, followed by a cathartic, mercurials being afterwards given to restore the function of the liver; topical depletion by means of leeches to the epigastrium has also been employed when necessary; this plan of treatment with a more free use of purgatives in the remittent form, has generally been successful, aided by quinine or bark, which were frequently necessary to check the great tendency to periodicity in both types.

Dysentery and diarrhœa.

Much mortality is annually occasioned by diarrhœa and dysentery which are endemial, and have been particularly frequent since 1833. In the opinion of the medical officer, they are produced by malarious miasm, and cases not unfrequently occur as the sequelæ of fever; both diseases partake of the same character, being prone to run into ulceration of the large intestines, particularly at the caput cæcum, and sigmoid flexure.

The treatment has also been very similar in both diseases, the only difference having been the employment of mild antiphlogistic means in the first stage or early period of the dysenteric cases; and a few leeches only can be applied in these cases with safety, for it has been observed that depletion has occasioned a sinking of the system, and occasionally a fatal aggravation of the ulceration. Ipecacuanha with opium, combined with tonic decoctions, quinine and astringents, have been generally used with good effect, along with counter irritation over the abdomen by means of blisters, and the ointment of the tartrate of antimony.

Cholera.

Cholera of a low type appeared at Chittoor, in an epidemic form, in the years 1833 and 1837. The only peculiarity in the treatment adopted, has been the employment of the sulphate of alumina, on one of these occasions, to restrain the purging and vomiting; and in some cases it was thought to be attended with advantage. The mortality has however been 57 per cent, on the number treated.

Dropsy. The cases of anasarca have frequently followed as a sequela of fever, and have been for the most part attended with diarrhœa; as all these patients were greatly reduced in strength, the result has consequently been unfavorable.

Ulcers. Several cases of phagedenic ulcers may be seen by the table to have occurred, and amongst the class of "other diseases," ulcers form a large proportion of the admissions, many of which are stated to have assumed a sloughing character; the general health in all these cases was more or less disordered, many of the patients had occasional paroxysms of fever, others suffered from diarrhœa, and the tongue was generally found to be thickly coated with a yellow fur. In such cases charcoal poultices were first applied, followed by cataplasms made with the margosa leaf, and a wash consisting of a weak solution of nitric acid, which mode of treatment was found to be highly beneficial. In others again, where the constitution had been severely injured by repeated attacks of fever, the ulcers after having degenerated into large sores, became covered with a thick slough of a dirty white colour, attached to an irritable bleeding surface, which on falling off, exposed the muscles, and sometimes even laid bare the bones of the leg to a considerable extent; diarrhœa was generally present in these cases.

With regard to the constitutional treatment, bark and quinine were the remedies found most useful, and until the system became invigorated no good effect followed the use of any local applications. In no instance have these ulcers assumed the character of hospital gangrene, although in some cases the sloughing has gone so far as to expose nearly the whole length of the tibia, or the entire of the dorsum of the foot, (they have been exclusively confined to the lower extremities,) and have not in any one instance evinced the slighest

tendency to spread by contagion. Sloughing ulceration which prevailed to a great extent at particular periods, as in the years 1830, 1833, 1837 and 1838, is supposed to arise from the same causes which produce fever, and other endemic diseases at the station. The inhabitants of the village are as liable to this form of ulceration as the prisoners, and are affected precisely at the same periods. At such seasons all sores or cuts especially in weakly subjects, take on an unhealthy action, as was strongly exemplified in 1830; twelve men on attempting to escape from prison received sabre wounds for which they were admitted into hospital, in those who were weakly the wounds assumed a sloughing character, while in those whose constitutions were robust, though equally severe, and treated in the same ward, they healed rapidly. In the same year fevers and bowel complaints were numerous, the season was irregular, the rain having continued throughout the whole of the warm months, and it may further be added, that the monsoon of the preceding year was scanty.

SOUTHERN DIVISION OF ARCOT.

Description of South Arcot. This collectorate is situated between north latitude 12°16′, and 11°26′, and east longitude 79°50′, and 78° 45′; being bounded by the northern division of Arcot on the north; on the south by Trichinopoly, and the Coleroon river which separates it from Tanjore; on the west by Salem; and on the east by the bay of Bengal. Its average length from north to south is 75 miles, and its breadth from east to west, 63 miles, presenting a surface which is estimated at 8,049 square miles.

The aspect of the country resembles that of the other parts of the Coromandel coast, being a low level near the sea, rising into hills in the interior, but which in this district are not in continuous ranges.

Rivers and Tanks. A large river the Panaur, and several smaller streams run through the district from the westward to the sea. The Panaur has its source in the Nundidroog hills in Mysore, from whence it takes a south east course, and falls into the sea at Cuddalore; and the Coleroon as it flows past the southern boundary of this collectorate, may be mentioned as partly belonging to it. The land in the vicinity of these rivers is irrigated from them by means of channels of considerable extent, from which also various tanks are supplied, and which in the dry season when the rivers become low and dried up, afford a supply of water for the purposes of cultivation. Several of these tanks are of very considerable extent, and there are upwards of 3,000 of smaller size:

The Vizram tank in the talook of Manangooty, in the the south east extremity of the collectorate, is filled from the Coleroon, and is eleven miles in length, and of considerable breadth, the whole of the talook being irrigated from it. The Chullumbrum talook is irrigated by a large channel from the Coleroon, which also serves as a canal for the conveyance of ore to the iron foundery of Porto Novo, and communicates with the Vellar river near to that place. There are likewise two large tanks in the talook of Phawnagherry supplied partly from the Pellar river.

Soil. The soil near the coast is sandy and generally barren, further inland it is mixed with a black mould, and in many places becomes red, and gravelly, and more productive; a great portion of the land lies waste, or is covered with a stunted jungle, and it is calculated that not more than one-eighth part of the district is under cultivation, or about 2,45,349 cawnies. The parts under cultivation are very productive, and the clearing of the land is annually progressing.

Vegetable produce. Rice and other grains grow luxuriantly, cotton and indigo being also produced; cotton cloth was formerly Cotton Trade. manufactured to a considerable extent for exportation, but has been in a great measure superseded

by English manufactures, there is still however some trade carried on, in blue and other native cloths, and also in indigo. Much of the land is favorable for the growth of cotton, and native husbandry is not seen to better advantage in any part of the Carnatic than in south Arcot.

Talooks. The collectorate is divided into 13 talooks, of which Cuddalore is the principal, they vary much both in size and population. The amount of the latter ranges from 15, to 70,000 in the several talooks. The great mass of the people are ryots, but many are occupied in the manufacture of cotton goods. The proportion of Mahomedans to Hindoos is about one to thirty.

Town of Cuddalore. The town of Cuddalore the capital of south Arcot, is situated on the sea coast, close to fort St. David, about 100 miles south of Madras, and 16 south of Pondicherry. It is the general depôt for European pensioners, and the principal station of the zillah, in which are the courts, jails, &c.

River Panaur. The Panaur river, the origin and course of which have been already described, as it approaches the coast, takes a sweep to the north, and bends again to the south, close to and on the west side of fort St. David; and, running parallel to the beach for three or four miles, is only separated from the sea by a bank of sand, in some places but a few hundred yards in breadth; it enters the sea about a mile below the town of Cuddalore, being joined at its embrochure by the Carangooly river, a stream of some size, running from the southward.

At the point where the Panaur takes a northerly direction at Vanicaput, a branch is given off from it which runs eastward and joins the main river again in its southerly course, thus enNew Town. closing a semicircular tract of land, on which stands the new town of Cuddalore; the old town being on its opposite or southern side. The tide flows several miles up the river which may be said during the dry months, to be more an inlet of the sea or back water, than a fresh water river.

Its depth is about six feet when the tide is low, and a muddy bank of considerable extent is exposed, from which disagreeable odours arise, especially in the hot season.

Swamps. There is also a small swamp immediately to the north of the European pensioners lines which is daily flooded, and though at times very offensive, it does not seem productive of injurious consequences.

Low site of the town and vicinity. The site of Cuddalore, and its immediate vicinity, is not more than five feet above the level of the sea, the soil being sandy and mixed with clay; the gardens in new town are planted with ornamental trees and shrubs, and the roads are lined with majestic banian trees.

Aspect of the surrounding country. The country around is generally open, there being no jungle of any importance, and no hills within many miles; a considerable part is under wet cultivation, irrigated from rivers and tanks which are numerous.

Salubrity of Station. From the lowness of its site, and the quantity of water on all sides, Cuddalore might be expected to prove an unhealthy spot, such however is not the case, for both the native inhabitants and European residents, enjoy a remarkable immunity from disease; and new town, and fort St. David are proverbially healthy.

Water. There are several small tanks near the town, the water of which is brackish, as is also that from wells, which can only be used for culinary purposes; but remarkably pure drinking water is procured at the distance of about half a mile.

Climate favourable to convalescence. The climate like that of Madras is exempt from sudden vicissitudes of temperature, and it has been observed that storms, or sudden atmospherical variations are less frequent here, than on the more northern

parts of the Coromandel coast. Cuddalore is found to be favorable to convalescence from acute attacks of disease, and is also beneficial in that irritable state of the constitution which frequently remains after severe and long continued fever, and generally in cases in which there is much constitutional derangement, without serious organic disease; it does not appear to possess any salutary influence in pulmonary affections. Sick officers and convalescents not unfrequently resort to Cuddalore for change of air, and several bungalows have been erected in new-town for their accommodation, which are procurable at moderate rents.

The number of pensioners residing here generally amounts to upwards of 250, they live with their families in the old-town, in neatly built houses, which are laid out in regular streets lined with trees, a small garden being attached to each. They perform no duty, but are in some degree under military control, an officer being in charge of the Depôt.

Diseases of European Pensioners.

It may be interesting to shew in a tabular form, the diseases to which European soldiers long resident in India, are subject, and the ratio of mortality among them.

DEPOT OF CUDDALORE.

No. 10.—*Table exhibiting the Number of Admissions and Deaths from each Class of Disease for 9 years.*

CLASSES. DISEASES.	1829 to 1838.* Aggregate Strength 2,269. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers..... Febris ephemera	7	0	2	0								
„ intermit.quot	17	1	35	2								
„ tertiana.....	0	0	0	0	27	2	46	3	73	5	3 ·217	6 ·849
„ remittens.....	1	0	1	0								
„ continua.....	2	1	8	1								
Cholera.....	3	2	7	4	3	2	7	4	10	6	0 ·440	60 ·0
Diseases of the Abdominal viscera..... Diarrhœa.....	32	6	56	10								
Dysenteria acuta et chronica.	59	9	65	9	112	17	143	21	255	38	11 ·238	14 ·901
Hœmorrhois....	21	2	22	2								
Hepatitis acuta et chronica...	66	6	72	3	66	6	72	3	138	9	6 ·051	6 ·521
Diseases of the Lungs and Heart Catarrhus.....	10	1	9	3								
Asthma.....	11	0	10	2								
Phthisis pulmonalis.....	7	7	2	1	56	13	39	8	95	21	4 ·186	22 ·105
Hœmoptysis....	0	0	2	1								
Pneumonia.....	5	1	1	0								
Dyspnœa.....	23	4	15	1								
Diseases of the Brain. Apoplexia.....	1	1	5	3								
Epilepsia.....	4	2	8	3								
Paralysis.....	6	1	10	1	88	6	105	9	193	15	8 ·505	7 ·772
Delirium Tremens et Ebrietas.....	77	2	82	2								
Rheumatic affections. Rheumat. acutus et chronicus	103	8	101	4	103	8	101	4	204	12	8 ·980	5 ·882
Other diseases..	178	15	223	14	178	15	223	14	401	29	17 ·672	7 ·231
Total....	633	69	736	66	633	69	736	66	1369	135	60 ·334	9 ·861

Remarks on preceding table. The per centage of diseases of an acute nature, is less than among effective troops, but chronic affections, as might naturally be expected, are more prevalent, and the mortality is considerably greater from both.

The annual average strength for nine years has been 252, and the average annual admissions into hospital 152, or 60 per cent on the strength; and the average annual deaths have been 15, or nearly 10 per cent on the number treated.

The greatest mortality has occurred from bowel complaints and hepatic affections, a third part of all the deaths having

* Exclusive of 1832.

been produced by these diseases; the next most fatal class, is that of diseases of the lungs, which have been chiefly of a chronic character; and the third, diseases of the brain.

An account has been obtained of 42 *post mortem* examinations, and it may be useful to shew in a concise manner, the appearances presented on dissection.

Diarrhœa Cases, No. 6. Large intestines ulcerated in all; liver enlarged of a pale colour in two; tuberculated in one; in three natural.

Dysentery, Acute, No. 5. Intestines deeply, and extensively ulcerated in all; abscess of liver in one, and this organ was pale and hard in two; in the remaining two natural.

Dysentery Chronic, No. 5. Large intestines ulcerated in all, in two the ulcers chiefly confined to the rectum, and in one they were pale and flabby; abscess of liver in one and this organ was enlarged, dark coloured and mottled in two, natural in the remaining two.

Hepatitis, No. 6. Large hepatic abscess in three, liver tuberculated in one, enlarged, hard and pale in the remaining two.

Phthisis pulmonalis, No. 3. Lungs tubercular in two; abscess of liver in one, the latter organ enlarged in another, in the remaining one healthy.

Dyspnœa, No. 3. Heart enlarged in one, and pericardium full of serum; in another large abscess in left lung; liver tubercular in one, in two healthy.

Ascites, No. 4. Liver pale, hard with tubercular nodules in all, some of the tubercles softened.

Rheumatism Chronic, No. 6. Water in pleura, and pericardium in one; lungs dark, and partly hepatized in two; large gut ulcerated in one; liver pale, and hard in two, enlarged, and dark in one, abscess in liver in one, this organ was natural in two.

Delirium Tremens, No. 4. Brain softened in all, with water in ventricles; abscess of liver in one, in two hard, and very pale, in one liver natural.

Jail. The jail is a large upstair building, which was in former days a factory, it is substantially built forming three sides of a quadrangle; the lower story is appropriated for prisoners, in which there are fourteen large cells, one being used as an hospital; the average number of prisoners is about 400, but it can accommodate 600. It has been occupied only since 1835, but as no native troops are stationed in this collectorate, it has been thought proper to annex a return of sick amongst the prisoners, from that period up to 1841 inclusive, no other data being available, from which an account of the diseases peculiar to the climate can be given; there appears however to be no reason for supposing, that they differ materially from those to which the natives of the neighbouring collectorates are subject, and which have already been noticed; the climate, mode of living, customs, &c. being perfectly similar in all.

JAIL OF CUDDALORE.

No. 11.—*Table exhibiting the Number of Admissions and Deaths of Convicted Prisoners, from each Class of Disease for 7 years.*

CLASSES.	DISEASES.	1835 to 1841. Aggregate strength 1,953 — 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers,	Febris ephemera	22	0	32	0								
	„ intermittens.	153	3	249	3	175	5	283	4	458	9	23 ·451	1 ·965
	„ continua	0	0	2	1								
	Cholera	6	2	8	5	6	2	8	5	14	7	0 ·716	50 ·000
Diseases of the Abdominal viscera,	Dysenteria acuta	35	3	34	4								
	„ chronica	23	5	37	10	58	8	71	14	129	22	6 ·605	17 ·051
	Diarrhœa	35	6	44	4								
	Colica	3	0	0	0								
	Obstipatio	2	0	1	0	69	8	75	4	144	12	7 ·373	8 ·333
	Hœmorrhois	1	0	4	0								
	Dyspepsia	28	2	26	0								
Diseases of the Lungs.	Catarrhus	1	0	3	1								
	Asthma	1	0	3	0	4	0	7	2	11	2	0 ·563	18 ·181
	Dyspnœa	2	0	1	1								
Diseases of the Brain.	Epilepsia	1	0	0	0								
	Cephalalgia	12	0	14	0	13	0	15	0	28	0	1 ·433	0 ·0
	Amentia	0	0	1	0								
Eruptive Fevers.	Variola	3	2	0	0								
	Varicella	32	0	34	1	37	2	34	1	71	3	3 ·635	4 ·225
	Erysipelas	2	0	0	0								
Dropsy.	Anasarca	5	5	12	1								
	Ascites	0	0	2	0	5	5	14	1	19	6	0 ·972	31 ·578
Rheumatic affections.	Rheumat. acutus et chronicus	74	0	63	4	74	0	63	4	137	4	7 ·014	2 ·919
Venereal affections.	Syphilis primitiva	2	0	0	0								
	„ consecutiva	1	0	1	0	5	0	2	0	7	0	0 ·358	0 ·000
	Hernia humoralis	1	0	0	0								
	Strictura urethræ	1	0	1	0								
Specific diseases.	Atrophia	3	2	1	1								
	Lepra	2	1	2	1	11	3	3	2	14	5	0 ·716	35 ·714
	Dracunculus	5	0	0	0								
	Scrophula	1	0	0	0								
Diseases of the Eye.	Morbi Oculorum	8	0	6	0	8	0	6	0	14	0	0 ·716	0 ·000
do. „ Skin.	cutis	70	0	16	0	70	0	16	0	86	0	4 ·403	0 ·000
	Other diseases.	166	0	138	5	166	0	138	5	304	5	15 ·565	1 ·646
	Total.	701	33	735	42	701	33	735	42	1436	75	73 ·527	5 ·222

PONDICHERRY.

The town of Pondicherry, once celebrated as being the capital of the extensive French settlements in India, was, when in the possession of the British, (i.e. till 1817, when it was ceded to its former masters) attached to the southern division of Arcot. The town lies on a barren sandy plain close to the beach, situated in north latitude 11°57″, and east longitude 79°54″, distant south of Madras 85 miles. The trade and importance of this place have of late years greatly declined, and but little intercourse exists between it and the East India Company's territories; the extent of sea coast appertaining to the settlement, is about five miles, and its breadth from three to four miles inland, and the population of the town amounts to from 25,000, to 30,000 inhabitants, including both natives and persons of European (French) descent.

The records of the Medical Board Office do not contain any information of interest, respecting the climate or medical statistics of this place.

It may however be noticed here as a fact of great importance, that hepatic complaints, especially of an acute form, are entirely unknown amongst the French inhabitants of this place. This exemption from a disease so prevalent and fatal amongst the British residents in India, is attributed to their mode of living being so different both in regard to food and drink; the latter consuming much animal food, malt and spirituous liquors, and strong wines; whereas the former live more on vegetable food and curries, and use little else than the light wines of France.

PORTO NOVO.

Porto Novo a sea port town 18 miles south of Cuddalore, in north latitude 11° 28″, and east longitude 79° 49″, has of late years risen into some importance, from the circumstance of an extensive iron foundery having been established

there, by a company of European gentlemen; the ore which is found in great abundance in the vicinity, is said to be of superior quality, and to yield steel of the best description; some difficulty has however arisen in finding a market for the pig iron, which has been smelted in large quantity, and which has consequently thrown a damp on the speculation; it may however be expected that in course of time this difficulty will be overcome.

CHINGLEPUT.

Situation and Boundaries. This district or collectorate, formerly called the Jagghire, runs along the Coromandel coast about 120 miles, and is of unequal extent inland, its average breadth being about 45 miles; it presents an area computed at 3020 square miles. On the north, it is bounded by the collectorate of Nellore, on the south and west, by the southern and northern divisions of Arcot, and on the east, by the bay of Bengal.

Appearance of the country. The district in general is low, and interspersed here and there with hills, and the soil is very indifferent being sandy, with large detached masses of granite projecting in many places; in other parts of the district it is dry, and from want of water, uncultivated, but cocoanut and palmyra trees, natives of such soils, are abundant, and thrive without trouble. Inland the country becomes more clayey

Soil. and is of course more productive. The whole extent of land under cultivation is estimated at 72,000 cawnies; the chief produce being dry grain, betel, oil, fruits and vegetables, all of which find a ready market at Madras.

The sources of irrigation are chiefly tanks, there are also springs, rivers, wells, ponds, sluices and *annicuts; the water in the tanks collected during the monsoon, is reserved for irrigation in the dry season, which lasts for nearly nine months of the year.

The only river of much importance is the Palaur which rises among the Nundidroog hills in Mysore, and after

*Works of masonry made to divert the water of rivers from its natural course.

a winding course of 220 miles through Mysore and the Carnatic, passing Arcot, Wallajahbad and Chingleput, falls into the sea at Sadras; there are a few smaller streams in the district and several lakes, as the Ennore, Pulicat and Sadras lakes; and also many large tanks, such as the Chembrunbacum, Ootramaloor, Redhills and the Carangooly tanks. There are no mountains in the collectorate, but there are several rocky and barren hills, as St. Thomas' Mount, the Palaveram, Sheevarum, Tripasore and Carangooly hills.

Climate. The climate does not materially differ from that of Madras.

Talooks. The collectorate is divided into small districts or talooks seven in number, named Carangooly, Ootramaloor, Conjeveram, Chingleput, Manungulum, Tripasore and Sydapet, the principal towns are Conjeveram, Symbrambacum, Chingleput the capital of the district, Covelong and Sadras; and the military stations are Wallajahbad, Palaveram, St. Thomas' Mount and Poonamallee.

Population. The extent of the population in 1837, amounted to 336,395, or 111 to each square mile; there being males 174,471, and females 161,924, and the number of houses amounted to 66,609, being 4½ persons to each house.

Employment. The principal employment of the inhabitants is agriculture, the only article of manufacture being coarse cloth, and even that is carried on to a very limited extent. The great mass of the population are Hindoos, Mahomedans being but thinly scattered over this part of the country.

Conjeveram. Conjeveram is situated in a valley upon the western boundary of the collectorate, and formerly belonged to north Arcot; it is a large town, pretty regularly built, the streets are broad and planted with cocoanut trees, and a small stream runs along its western side. The soil in the neighbourhood is somewhat clayey, from the decomposition of the felspar which abounds in the granite, and proves very fertile; the river and surrounding tanks are also favorable

to cultivation, the inhabitants are principally ryots and weavers. Many brahmins reside here, and the large pagoda or temple at Conjeveram is greatly famed in hindoo mythology. It is one of the strong holds of hinduism in southern India.

Symbrumbacum The town of Symbrambacum lies 17 miles west from Madras, the inhabitants are entirely ryots; at this place there is a remarkably large tank 20 miles in circuit, formed by an embankment between two natural ridges of ground; this tank irrigates an extent of land sufficient to give employment to 5000 persons. Ennore, Covelong, Mahalipooram and Sadras are villages of smaller extent, all situated on the coast.

Chingleput. The town of Chingleput, the capital of the collectorate, where a zillah court is held, is 38 miles distant from Madras, in a south-west direction. It was formerly a place of some strength, and is still surrounded by a rampart and ditch, two miles in circumference; the former however is in a very bad state of repair, and the ditch is allowed to become dry in the hot season.

Fort. The fort is situated in the northern extremity of a valley upwards of a mile broad, and is bounded on the eastern, and greater part of the northern faces, by an artificial lake two miles long and one broad, from which the ditch is supplied with water.

The fort is 400 yards in length, from north to south, and 280 in breadth, from east to west; it is divided into two parts by a rampart and ditch, the eastern is considerably elevated, and forms what is called the inner fort. The entire western face and part of the northern, are bounded by rice fields irrigated from the lake, the water of which is retained by an embankment 1000 yards in length, on the top of which runs the high road leading from Madras to the southward. Small, rocky and bare hills lie to the south and north of the fort, but the

country generally around is level and open, and a low and thin jungle occurs in some parts.

The town of Chingleput lies about half a mile to the south east of the fort, it consists almost entirely of one long street; at the same distance from the fort, is another small village named Nullam, both are tolerably clean and airy, and the Palaur river runs close by the latter.

The public buildings within the fort, are the jail, a place of arms, the hospital and the court house. One or two companies of sepoys stationed here are hutted on high ground, about a quarter of a mile to the south.

Salubrity of the Station.

The inhabitants in the neighbourhood, as well as the prisoners in the jail, have been generally remarkably exempt from disease, notwithstanding the proximity of the lake from which, when the water becomes low a strong odour arises, from the decay and decomposition of a great expanse of weeds in its bed; this however has not led to any epidemic disease during the last 15 years, either amongst the inhabitants or prisoners, although the jail is situated on the verge of the ditch of the fort, which is similarly circumstanced with the lake as to weeds, it being a swamp for two-thirds of the year.

Jail.

The jail is placed between the outer and inner walls of the fort, on the south side; the site is low and confined, and precludes a free circulation of air. It is however somewhat raised from the ground.

The building consists of two portions adjoining each other—one, the largest, is in the form of a parallelogram enclosing an area of 9 yards, by 15; it contains nine apartments varying from 15 feet by 39, to 15 by 17, with a verandah towards the area; it is a very old building formerly a cotton godown, and was converted into a jail in 1802, when the zillah court was established here. The other portion occupies two adjacent sides of a parallelogram, the opposite sides of which are the eastern part of

the first building, and a high wall on the south, forming an enclosure of 7 yards by 15; it has also a verandah, and contains four apartments of smaller dimensions.

From the situation of this jail the ventilation is imperfect, but the apartments are all kept very clean, and the place around is dry.

The system of dieting, clothing &c. of the prisoners, is detailed in the general statement, at the end of the report for the division.

Hospital. The hospital is situated within the fort, being a long range of building parallel to, and about 20 yards from the western rampart, which shuts it in on the rear; at the sides and in front, at a distance of 12 feet, it is enclosed by a brick wall 6 feet high. The building measures 37 yards by 12, is constructed of brick and chunam, pent roofed and tiled, and floored with brick, it is provided with a verandah in front and rear, and is well raised from the ground.

It is divided into 3 wards, and a dispensary, the wards have no direct communication with each other, they are all well ventilated by doors and windows, the latter of which are secured with iron bars and shutters, one of the wards is appropriated for the sick of the detachment of sepoys on duty here. In the same enclosure are two cells for insane patients, of 10 feet square.

Both jail and hospital are well supplied with good water.

Notwithstanding the objectionable site of the jail, and other causes of disease alluded to, such as exhalations arising from the tank and ditch during the day, succeeded by vicissitudes at night, which are always great in the immediate vicinity of marshes, the following tables for 10 years, shew but a very small amount of acute disease. The most fatal diseases have been *cholera* and *bowel complaints*, and the most numerous, *fevers*, *bowel complaints*, *eruptive diseases* and *diseases* of the *skin*.

JAIL OF CHNIGLEPUT.

No. 12.—*Table exhibiting the Number of Admissions and Deaths of the Convicted Prisoners, from each Class of Disease for* 10 *years.*

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1,887. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd	Admissions and Deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers	Febris ephemera	25	0	34	0								
	„ intermittquot	179	1	314	2								
	„ tertiana	2	0	2	0	247	1	385	2	632	3	33 ·492	0 ·474
	„ remittens	1	0	0	0								
	„ continua	40	0	35	0								
	Cholera	15	11	3	0	15	11	3	0	18	11	0 ·953	61 ·111
Diseases of the abdominal viscera	Diarrhœa	76	4	95	9								
	Dysenteria acuta et chronica	30	4	56	6								
	Obstipatio	114	0	120	0	221	9	271	15	492	24	26 ·072	4 ·878
	Peritonitis	1	1	0	0								
	Hepatitis acuta et chronica	1	0	3	0	1	0	3	0	4	0	0 ·211	0 ·0
Diseases of the Lungs and Heart.	Catarrhus	20	1	20	0								
	Asthma	1	0	1	0								
	Pneumonia	1	0	1	0								
	Phthisis pulmonalis	1	1	2	2	25	2	25	2	50	4	2 ·649	8 ·0
	Hœmoptysis	1	0	0	0								
	Palpitatio	0	0	1	0								
	Dyspnœa	1	0	0	0								
Diseases of the Brain.	Epilepsia	7	0	5	0								
	Apoplexia	1	1	0	0	12	1	12	1	24	2	1 ·271	8 ·333
	Paralysis	4	0	4	1								
	Mania	0	0	3	0								
Eruptive fevers	Variola	0	0	8	1								
	Varicella	132	0	20	0	133	0	28	1	161	1	8 ·532	0 ·621
	Rubeola	1	0	0	0								
Dropsy	Anasarca	6	2	8	2	6	2	8	2	14	4	0 ·741	28 ·571
Rheumatic affections.	Rheumatismus acutus et chronicus	135	1	150	0	135	1	150	0	285	1	15 ·103	0 ·350
Venereal affections	Syphilis primitiva	11	0	4	0								
	Gonorrhœa	3	0	3	0	25	0	16	1	41	1	2 ·172	2 ·439
	Hernia Humoralis	11	0	9	1								
Specific diseases	Atrophia	7	1	1	1								
	Lepra	1	0	1	0	0	1	10	1	19	2	1 ·006	10 ·526
	Dracunculus	0	0	1	0								
	Scrophula	1	0	7	0								
Diseases of the eye	Morbi Oculorum	20	0	34	0	20	0	34	0	54	0	2 ·861	0 ·0
do. of the skin	„ Cutis	170	1	125	0	170	1	125	0	295	1	15 ·633	0 ·339
	Other diseases	902	6	1048	2	902	6	1048	2	1950	8	103 ·338	0 ·410
	Total	1921	35	2118	27	1921	35	2118	27	4039	62	214 ·043	1 ·535

JAIL OF CHINGLEPUT.

No. 13— *Table exhibiting the Number of Admissions and Deaths, of the Prisoners under trial, from each Class of Disease, for 10 years.*

CLASSES.	DISEASES.	From 1829 to 1838. Aggregate strength 1,180				Admissions and Deaths from each class of disease.				Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.		Average percentage of deaths to sick.	
		1st Half.		2d Half.		1st Half.		2d Half.							
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.						
Fevers	Febris ephemera	0	0	0	0	25	2	26	3	51	5	4	·822	9	·803
	,, intermittens.	23	0	24	2										
	,, tertiana	0	0	1	0										
	,, continua	2	2	1	1										
	Cholera	2	0	0	0	2	0	0	0	2	0	0	·169	0	·0
Diseases of the abdominal viscera.	Diarrhœa	14	3	16	4	51	4	43	5	94	9	7	·966	9	·574
	Dysenteria acuta et chronica	10	1	5	0										
	Obstipatio	27	0	22	1										
Diseases of the Lungs.	Catarrhus	1	0	1	0	1	0	2	1	3	1	0	·254	33	·333
	Asthma	0	0	1	1										
Diseases of the Brain	Epilepsia	0	0	2	0	0	0	2	0	2	0	0	·169	0	·0
Eruptive Fevers	Variola	5	0	18	2	81	0	21	2	102	2	8	·644	1	·960
	Varicella	76	0	2	0										
	Erysipelas	0	0	1	0										
Dropsy	Anasarca	1	1	1	0	1	1	1	0	2	1	0	·169	50	·0
Rheumatic affections	Rheumatismus acutus et chronicus	15	0	8	0	15	0	8	0	23	0	1	·949	0	·0
Venereal affections	Syphilis primitiva	6	0	6	1	6	0	6	1	12	1	1	·016	8	·333
Specific diseases	Lepra	0	0	2	1	1	0	2	1	3	1	0	·254	33	·333
	Dracunculus	1	0	0	0										
Diseases of the Eye	Morbi Oculorum	3	0	0	0	3	0	0	0	3	0	0	·254	0	·0
Diseases of the Skin	,, Cutis	94	0	52	0	94	0	52	0	146	0	12	·372	0	·0
	Other diseases	125	0	87	2	125	0	87	2	212	2	17	·966	0	·943
	Total	405	7	250	15	405	7	250	15	655	22	55	·508	3	·358

Remarks on the preceding tables of Disease.

The average annual strength of the convicted prisoners, has been 188, and the annual admissions averaged during the same time, 208; the mortality exclusive of cholera being 5 annually. The average was not materially increased during the year of famine, (1833) either in this class of prisoners, or amongst those waiting for trial,

as in the other jails in the division; a sufficient supply of food having been sent to Chingleput from Madras, causing great numbers of people to resort thither. The table for those under trial exhibits but little disease, and the number of prisoners under this head, is less than in the other jails.

The most frequent diseases have been *fevers, bowel complaints, eruptive diseases,* and *diseases* of the *skin.*

Fever. The cases of fever have generally been of a mild description, seldom requiring more than an emetic and purgative for their cure, and the few which resisted these simple means, generally yielded to the sulphate of quinine. The mortality attending every species of this disease, during the ten years, has not exceeded ½ per cent on the number treated, a sufficient proof of their mild and tractable nature.

Diarrhœa and Dysentery. Diarrhœa and dysentery have always been diseases of frequent occurrence in the Chingleput jail, attributable and apparently correctly, to the confined and ill ventilated state of the building; for since 1833, at which time the ventilation was considerably improved, these diseases have been comparatively less frequent; thus during the first five years of the period embraced in these remarks, viz. from 1829 to 1833 inclusive, 178 cases, with 12 deaths occurred; while from 1834 to 1838 inclusive, only 80 cases, with 11 deaths have taken place; and including the cases of these diseases amongst the class of untried prisoners, or waiting for trial, during the same period, we have for the first, 216 admissions, with 20 deaths, and during the second, 82 cases, with 11 deaths. But though these diseases are much diminished in point of number, the ratio of mortality still attending them keeps fully as great as formerly, being 13½ per cent; and it may here be remarked, that the amount of febrile disease is found to be much the same, in both periods.

The foregoing statement also shews that, exclusive of deaths

from cholera, nearly one half of all the mortality has been caused by bowel complaints. The treatment during the greater part of the time consisted in the employment of ipecacuanha with powdered gum acacia, occasionally combined with opium and blue pill.

Cholera. The cases of cholera all occurred in 1833, except three, which took place in 1838.

Eruptive Diseases. Eruptive fevers form a considerable number of the admissions, in both classes of prisoners, these diseases occurred in the years 1830, 33, 34 and 1835, and almost exclusively in the first half of each year. Of modified small pox and varicella, 230 admissions have taken place, without one casualty, and of variola 31 cases, with three deaths. The vaccine establishment of this zillah appears to be carefully attended to by the medical officer in charge, a vaccinator being stationed in each talook.

The following interesting case of accident, which occurred at Chingleput in 1837, is worthy of record, as shewing the extent of injury from which natives of India occasionally recover.

A ryot aged about 30, was admitted into the jail hospital on the evening of the 30th September at 7 P. M., having been brought from a village 10 miles distant from Chingleput, where six hours previously he had been wounded in the abdomen by a cow goring him; a great part of the small intestines were protruding from the wound, which a native doctor had been attempting to reduce or return, for nearly two hours before bringing him to the hospital. The wound was in the right iliac region, a little above the passage of the spermatic cord, into which the little finger of the left hand was introduced with some difficulty, when it was enlarged upwards, fully half an inch with a probe pointed bistoury, more intestine immediately rushed out, but the whole was replaced by gentle manipulation, and the wound closed with three sutures. The

patient went on very well for six days, but becoming tired of lying in the same posture, he got up and walked about, by which imprudence the wound was torn open; the parts then sloughed, and the peritoneal covering of the intestine became inflamed, the abdomen swelled, the stools and urine were passed involuntarily, and the patient became delirious and frequently tore off the dressings. The wound was again closed with adhesive straps, poultices and fomentations were applied to the abdomen, and opiates given both by the mouth, and in enemata—the other constitutional treatment was well directed and modified as required, mercury, quinine and diffusible stimulants having been employed from time to time. The patient rallied and recovered, and was discharged quite well on the 17th November following.

WALLAJAHBAD.

Situation and description of

The military station of Wallajahbad is situated about 40 miles south-west from Madras, and 30 miles inland from the coast at Sadras; in latitude 12° 58″ north, and longitude 79° 39″ east.

The site of the cantonment is on a piece of ground gently rising above the surrounding plain, though not many feet above the level of the sea. It is three quarters of a mile in length running south-east, and nearly half a mile in breadth; the Palar river is about 500 yards distant to the south. A large tank called Tinnerey lies on the north side, and the populous town of Conjeveram on the west, distant between 6 and 7 miles. Several small hills of granite lie between it and the sea coast, the nearest being distant two miles and a half, and the highest not more than 500 feet above the level of the sea; these hills are perfectly bare, and devoid of all vegetation.

Palar river.

The river Palar, as has been already mentioned, rises in the Nundidroog hills in Mysore, taking

in the first part of its course a southerly direction, but through this part of the country, from Conjeveram to the sea at Sadras, it runs nearly in a straight line. Its bed is sandy, and for about eight months of the year nearly dry; during the rains it presents a surface of water of 500 yards in breadth, which however on subsiding leaves but little slime or deposit, likely to be productive of malarious disease. Water courses are opened on both sides, for the irrigation of the land in its vicinity. Close to and parallel with the left bank of the river, is a streamlet which contains running water throughout the year, being supplied from springs; from it the cantonment and also the village are abundantly furnished with drinking water; there are also numerous good wells in the cantonment, generally sunk in sandy or gravelly beds.

Water.

Village. The village of Wallajahbad lies to the south-east of the cantonment, half a mile distant, and consists principally of one street running east and west; from its vicinity to the river, and there being a considerable nullah passing through it, the town is well drained, and is tolerably clean, airy and dry.

Soil and produce. The soil in the immediate neighbourhood, is sandy, mixed with a marly clay, with here and there granite rocks interspersed, and the country for several miles round is partially covered by a thin stunted jungle, occasional clear patches of land intervening in which cholum, baujera and wuragoo are grown. Near the cantonment, especially on the north side, are several extensive paddy fields, watered from the large tank formerly mentioned, and besides these there is but little vegetation round the station, excepting a few straggling palmiras, and tamarind trees.

Climate. The climate, as to temperature, differs very little from that of Madras, though it is generally reckoned to be somewhat higher; both places are under the influence of the

same monsoons, and the distance of Wallajahbad from the coast is not so great as to prevent the sea breeze from reaching it. In the months of January, February and March fogs prevail, but are not found to be unhealthy.

Formerly one of Her Majesty's regiments, with one or two native corps, were stationed at Wallajahbad, but now, the only troops are the head quarters of a Native Veteran Battalion, the Drum boy establishment, and details of native sick arriving from the eastern settlements.

Barracks. The European barracks, or at least what now remains of them, are occupied by the Veteran Battalion, and the Drum boy establishment, and the sick have ample accommodation in a part of what was formerly the European hospital.

During the period Her Majesty's troops were stationed here, the amount of disease was generally very great, and the vast mortality which occurred, obtained for Wallajahbad the unhappy name of, "the grave of Europeans."

Nothing can now be observed in the site of the cantonment or surrounding country, which can be looked upon as productive of the great extent of sickness which prevailed in the Royals, and Her Majesty's 30th regiment, in the years 1807, and 1808, shown in the following statement.

No. 14.—*A tabular view of the Sickness at Wallajahbad from 1st January 1807, to 31st October 1808, in Her Majesty's 30th Regiment, and 2d Battalion of the Royals.*

	1807.		1808.		1 year and 10 months.				
	Number of Sick.	Number of Deaths.	Number of Sick.	Number of Deaths.	Total number of Sick.	Total number of Deaths.	Average per centage of Sick to Strength.	Average per centage of deaths to sick.	Percentage of Deaths to Strength during this period has been 11·387.
Fever	137	11	440	15	577	26	30 ·146	4 ·506	
Dysentery	689	74	973	75	1662	149	86 ·833	8 ·965	
Hepatitis	5	1	29	3	34	4	1 ·776	11 ·764	
Jaundice	3	0	0	0	3	0	0 ·155	0 ·000	
Rheumatism	3	0	44	1	47	1	2 ·445	2 ·127	
Pleurisy	0	0	0	0	0	0	0 ·000	0 ·000	
Dropsy	0	0	10	1	10	1	0 ·522	10 ·000	
Ulcers	58	0	290	16	348	16	18 ·181	4 ·597	
Venereal	13	0	193	8	206	8	10 ·762	3 ·883	
Other diseases	193	9	142	3	335	12	17 ·502	3 ·582	
Total	1101	95	2121	122	3222	217	168 ·338	6 ·734	
Effective Strength	927		987		1914				

The site of the barracks is low, they are built in the form of a square closed on all sides, with a gateway to the north; the walls are of brick and mud, having pent and tiled roofs, with a verandah on the inner side, reaching to within six or seven feet of the ground; the floors are not raised, and in some parts of the building, they are even below the surrounding level. The only means of ventilation is by doors and windows, both of which are unprovided with venetians.

The cold wet floors during the monsoon, and imperfect ventilation, are alone considered as amply sufficient to produce dysenteric affections, and low typhoid fevers, the diseases which principally occasioned the great mortality amongst the European troops, at the time above mentioned. This opinion is confirmed by that of medical officers of the greatest experience; the following is an extract from a report by a late Superintending Surgeon on these barracks, viz. "the only cause (of the sickness) that can be imagined, "is the great defect in the public buildings, the floors are "too low, even lower than the surface of the surround-

"ing ground, and those of the officer's quarters are considerably "below the surface, and actually require a cut or drain all "round to prevent water running into the apartments."

The reports from Medical officers during the last 15 years, are invariably favorable, and bear testimony to the healthiness of the place, for the native troops, and for the inhabitants generally.

A tabular view of the principal diseases with the mortality, is given both for the Drum establishment composed of Indo-britons, and for the 2nd Native Veteran Battalion, in the absence of other data, no troops of the line European or Native, having been stationed at Wallajahbad for several years past; the conclusions to be drawn from them, are however, not so satisfactory as could be desired.

DRUM BOY ESTABLISHMENT.

No. 15.—*Table exhibiting the Number of Admissions and Deaths from principal Diseases for 6 years.*

CLASSES.	DISEASES.	From 1833 to 1838. Aggregate strength 686. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each Class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
Fevers....	Febris ephemera	40	0	80	0								
	„ intermittent.	13	0	41	1	57	0	144	2	201	2	29 ·300	0 ·995
	„ remittens....	4	0	23	1								
	Cholera.....	10	3	1	1	10	3	1	1	11	4	1 ·603	36 ·363
Diseases of the Abdominal viscera.....	Diarrhœa.....	37	0	57	0	42	2	70	0	112	2	16 ·326	1 ·785
	Dysenteria acuta et chronica.	5	2	13	0								
	Hepatitis acuta et. chronica...	2	0	2	0	2	0	2	0	4	0	0 ·583	0 ·0
Do. of the Lungs.....	Catarrhus.....	4	0	19	0	6	0	24	0	30	0	4 ·373	0 ·0
	Pneumonia.....	2	0	5	0								
Rheumatic affections.	Rheumatismus acutus et chronicus.....	17	0	7	0	17	0	7	0	24	0	3 ·498	0 ·0
	Other diseases.	507	2	522	0	507	2	522	0	1029*	2	150 ·0	0 ·194
	Total...	641	7	770	3	641	7	770	3	1411	10	205 ·685	0 ·708

* Four fifths of these cases were scabies and slight ulcers.

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No. 16.—*Table exhibiting the Number of Admissions and Deaths, from principal Diseases, for* 6 *years.*

CLASSES.	DISEASES.	1833 and 1838. Aggregate Strength 5,455. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & Deaths from each Class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each Class.	Total Deaths from each Class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers.....	Febris ephemera	31	0	27	0	193	6	329	13	522	19	9 ·569	3 ·639
	„ intermit: quot	107	4	223	9								
	„ tertiana.....	22	1	39	0								
	„ remittiens....	32	1	35	3								
	„ continua.....	1	0	5	1								
	Cholera.....	23	11	8	6	23	11	8	6	31	17	0 ·568	54 ·838
Diseases of the Abdominal viscera.....	Diarrhœa.....	35	3	39	4	47	5	56	8	103	13	1 ·888	12 ·621
	Dysenteria acuta et chronica..	12	2	17	4								
	Hepatitis acuta et chronica...	2	1	0	0	2	1	0	0	2	1	0 ·036	50 ·0
Diseases of the Lungs.	Catarrhus.....	10	3	11	1	20	7	24	4	44	11	0 ·806	25 ·0
	Asthma.....	6	2	8	0								
	Phthisis pulmonalis.....	0	0	1	1								
	Hœmoptysis....	0	0	1	0								
	Pneumonia.....	4	2	3	2								
Rheumatic affections.	Rheumatismus acutus et chronicus.	78	5	49	1	78	5	49	1	127	6	2 ·328	4 ·724
	Other diseases..	378	18	291	20	378	18	291	20	669	38	12 ·263	5 ·680
	Total....	741	53	757	52	741	53	757	52	1498	105	27 ·461	7 ·009

PALAVERAM.

Situation and general discription.

The cantonment of Palaveram, or as it is also called the Presidency cantonment, lies three miles south of St. Thomas's mount, situated close to the western side of the Palaveram range of hills, and four or five miles in a direct line from the coast. The cantonment which is exclusively for native troops, extends upwards of a mile in length, and about half a mile in breadth, and is laid out for four regiments of infantry.

The range of hills extends the whole length of the cantonment, which is disposed in the following manner, the officers

houses are close to the hills in four rows, intersected by four cross streets; in the first row are the quarters of the commanding, and field officers; in the second and third, those of the captains, and in the fourth are the houses of the subalterns. An open parade ground of 300 yards in breadth, extends from the officers lines to the barracks, which are four in number and in a line with each other, the main guard, a two storied building, being in the centre; the barracks or places of arms are equi-distant, and about two hundred paces apart.

At a short distance in rear of the barracks is a space of ground 200 yards in breadth, allotted for the huts of the men, and somewhat more distant are the hospitals, which are also four in number, and in a line with each other, each being flanked by the serjeants quarters, and the regimental store rooms. The solitary cells are placed near the main-guard.

Officers houses. The officers houses are well built, constructed of brick and chunam, a few of them have terraced roofs, they are generally however tiled, and for the most part raised a few feet from the ground. The rents are moderate, and the houses are sufficiently commodious.

Barracks and Hospitals. The Barracks and hospitals are very substantial buildings, with arched roofs, and granite floors. Each hospital consists of one long ward, 99 feet by 18 feet, calculated to contain 50 patients. They are provided with verandahs in front and rear, the ends being enclosed so as to form four small apartments, which serve as a dispensary, surgery, store-room, and bath-room. The walls and arched roofs of these buildings are of solid masonry, and the floors are raised 3 feet from the ground. They have 3 doors on each side, and two at each end, with ventilators above the latter; in the rear there is a cookroom and a privy; these hospitals appear perfect in every respect, with the exception of their not having venetians to the doors, and not being surrounded by a wall.

The ground, from the base of the hills, slopes gently in the direction of the barracks and hospitals, which are well drained, there being a separate drain round each building, leading to three main channels which run into the Adyar, distant 300 yards in the rear. The stream however at this place, is, from the level nature of the country, very sluggish, and in the monsoon season the buildings are under water, the ground being swampy nearly up to the officers houses, and the huts of the men have occasionally been washed down. In place therefore of being hutted in the locality described, lines have been erected for them near the bazaar, to the right of the cantonment, about half a mile from the nearest barracks, where the ground is higher.

The present lines as also the bazaar, are kept remarkably clean and dry.

There have been seldom more than two regiments stationed at Palaveram for several years past, and frequently only one, but formerly the number was kept complete to garrison Fort St. George, for which purpose one regiment was sent down to Madras monthly.

The place has generally been found to be very healthy, for although the hills shut out the sea breeze in a considerable degree, from the houses more immediately in their vicinity, those more distant enjoy it partially, as the wind passes through an opening in the centre of the range, and also round its southern extremity.

Soil. Near the hill the soil is composed of the disintegrated rock, consisting of green stone, gneiss and coarse sand stone; at a little distance it becomes sandy, and laterite is found near the surface. There is but little cultivation in the immediate neighbourhood, and for some distance around the country is quite clear of jungle, with the exception of a few scattered cocoanut and palmira trees; the can-

Water. tonment is well supplied with pure and wholesome water, there being good wells in almost every compound.

The native troops stationed here have been remarkably healthy, as shown by the following table of disease for five years—

No. 17.—*Table exhibiting the Number of Admissions and Deaths, from the more important Classes of Disease, for 5 years.*

CLASSES	DISEASES.	Aggregate strength 3,961. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half Ad.	2d Half Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers	Febris ephemera	125	0	209	0								
	„ intermit. quot	63	1	70	0								
	„ tertiana	13	0	6	0	225	4	317	3	542	7	13 ·683	1 ·291
	„ remittens	8	1	12	2								
	„ continua	16	2	20	1								
	Cholera	0	0	1	0	0	0	1	0	1	0	0 ·025	0 ·0
Diseases of the abdominal viscera	Diarrhœa	11	0	23	0								
	Dysenteria acuta et chronica	13	1	30	0	24	1	53	0	77	1	1 ·943	1 ·298
	Hepatitis acuta et chronica	5	1	1	0	5	1	1	0	6	1	0 ·151	16 ·666
Diseases of the Lungs & Heart.	Catarrhus	12	0	13	0								
	Asthma	8	0	9	0								
	Phthisis pulmonalis	6	3	3	2								
	Hœmoptysis	1	0	0	0	27	3	28	2	55	5	1 ·388	9 ·090
	Pleuritis	0	0	0	0								
	Pneumonia	0	0	1	0								
	Cardiitis	0	0	0	0								
	Palpitatio	0	0	0	0								
	Dyspnœa	0	0	2	0								
Rheumatic affections.	Rheumat. acutus et chronicus	119	3	100	0	119	3	100	0	219	3	5 ·528	1 ·369
	Other diseases	909	8	750	6	909	8	750	6	1659	14	41 ·883	0 ·843
	Total	1309	20	1250	11	1309	20	1250	11	2559	31	64 ·604	1 ·211

CANTONMENT OF SAINT THOMAS'S MOUNT.

St. Thomas's Mount the principal station of the Madras Artillery, and the head quarters of this arm of the force, is situated 8 miles west of fort St. George, and about four or five in a direct line from the sea, and enjoys from its position many important advantages; the cantonment is laid out at the base of the eastern, and southern sides of the hill from which it takes its name, and occupies a surface of 750 square acres; the barracks and most of the public buildings have an eastern aspect, and are open to the genial influence of the sea breeze.

Soil. The soil on which the cantonment stands, principally consists of red clay and gravel, and much of the neighbouring lands is under rice cultivation.

Roads. From Marmalong bridge, distant about two miles east, and which may be styled the portal of the Mount, the approach is by a gentle ascent, the road on each side being lined by rows of the "Ficus Indica" or banian tree, forming a beautiful and well preserved avenue, which affords a refreshing, and pleasant shade from the mid-day sun, this road the continuation of which leads from the Mount to Palaveram, is at all times kept in excellent order.

Adyar River. The Adyar river, which in the monsoon season forms a considerable body of water, runs at the distance of one mile north of the Mount, and like most other Indian streams becomes almost dry in the hot season.

Tanks. There are numerous tanks scattered over the face of the adjacent country, from which the lands under cultivation are irrigated, but there are no marshes or lodgements of water near the cantonment, likely to generate noxious exhalations.

The Mount hill. A small range of buildings and a chapel, belonging to the roman catholic clergy of Goa, occupy the summit of the Mount, where according to tradition the remains of Saint Thomas are interred. The hill is almost entirely composed of greenstone and syenite, the former of which is most abundant; it rises to its greatest height, 340 feet above the level of the sea, at the northern extremity, the eastern side being the most precipitous, particularly at a part where the greenstone rock is somewhat columnar; the slope is more gradual on the north-west and south-sides, which are covered with a thin coarse grass, and a small prickly shrub affording pasture for goats.

From the highest point, the hill slopes gently towards the south, masses of greenstone rock appearing here and there.

The syenite is well adapted for architectural purposes, and where the proportion of felspar in it is large, it is capable of taking a good polish, and is frequently used for ornamental purposes. The greenstone of the Mount is also used for building, and for road making, for which latter purpose it is found to be one of the best materials procurable.

Officers houses. The Officers houses are substantially built, many of them consist of two stories, and are terraced, they are generally placed in neatly laid out gardens, and the compounds are surrounded by fences made of the milk hedge, (or Euphorbium Tirucalli) occasionally interspersed with bamboo.

Rare fruit trees. It may not be considered out of place to notice a rare shrub, named the Sapodilla, which is found in one of the gardens here, as well as in the Government garden at Guindy, and which was originally brought to India by an officer of the artillery from Java. It attains a height of form 10 to 12 feet, resembles a small mangoe-tree, and bears a wholesome fruit of an oval form, which has the flavour when ripe of a medlar, or decayed pear; it is a native of the Cœlebes, and of some other Islands in the eastern archipelago.

The Adansonia digitata, or sour gourd, a beautiful and somewhat rare tree, is also found at the Mount, it is a native of Senegal, and remarkable not only for the size of its stem as compared with its height, but also as being the largest known tree. In one specimen at the Mount, the circumference of the trunk is 30 feet, but trees have been met with by travellers, measuring from 90 to 100 feet in girth. As its name implies, it was first introduced to notice by Dr. Adanson, it is chiefly an ornamental tree, but its fruit is occasionally used by natives in curries. It belongs to the same natural order as the cotton tree.

Climate. The climate of St. Thomas's Mount differs in no material respect from that of Madras, with the exception that in the hot season, the temperature is two or three degrees higher.

European foot Artillery Barracks. The barracks of the Foot Artillery, two in number, are placed at the bottom of the hill, and run in a direct line north and south, being freely open as before mentioned, to the influence of the sea breeze; they are calculated for two Battalions, and afford accommodation for 700 men. They consist of a separate range for each battalion, substantially built of brick and chunam, and floored with granite; each barrack is 130 yards long, by 16 wide, and 12 feet in height, and they are well ventilated by means of venetianed doors, and windows. The main guard lies between these two barracks.

Serjeant's quarters. The Serjeants rooms are 12 feet square, with a verandah 6 feet wide.

In the rear of the barracks spaces of ground are appropriated for parades, for skittle sheds, a racket, or fives court and for a library.

Offices. The cookrooms and other offices, are situated at a convenient distance from the other parts of the buildings,

and the drains from them are kept perfectly clean, and free from accumulations.

Wells. There is a well for each barrack, one contains good water, but the other is somewhat brackish; a well in the parcherry also affords a supply of excellent water for the use of the soldiers families.

The Parcherry. The parcherries consist of streets of small houses on the base and sides of the hill, the residences of married men, or others who have families, and who are allowed the indulgence of living out of barracks.

Congee houses. The congee houses, or places of temporary confinement, are placed in rear of the private parade ground, they are built of brick and chunam, are 6 yards square, and 12 feet in height, having a sky light, and three windows each, with a necessary; they seem ill calculated to answer the purposes of punishment, several men being frequently confined in them at one time.

European Horse Artillery Barracks. There are three Barracks for the Horse Artillery, situated on the southern side of the Mount, built of brick and chunam. One is 228 feet in length, and 16 in breadth, with verandahs in front and rear 9½ feet broad; it is a well ventilated building, and attached to it are rooms for the serjeants, 20 feet by 10, with convenient out houses. Another is a new bomb proof building, in excellent order, lofty and well ventilated, it is not however so cool as that building last mentioned, it consists of one room 156 feet long, and 37½ broad, there is a small front verandah 37 feet by 10, and a rear one of only 13 feet in length. It can accommodate 104 men with comfort, with a single row of bedsteads all round, but the number might if requisite be increased to 130. The unmarried men of the Horse Artillery usually occupy this apartment, the saddles and harness belonging to the troop are hung immediately

over the men's beds, and the leather when newly greased, emits a very unpleasant smell; the free circulation of air is also impeded, and the harness is a receptacle for insects, it has not however appeared to be detrimental to the health of the inmates. There is a row of small windows round the building, close to the roof, which conduces greatly to the free circulation of air. At one end of this barrack there are a few small buildings for the use of the serjeants of the troop.

The third barrack can accommodate 104 men comfortably, it is at present occupied by details of native Horse Artillery.

Hospital. The Hospital is situated at the distance of about 80 yards from the line of barracks, it is a bomb-proof building of a square form, and is capable of accommodating 28 men—and on emergency could be made to contain 40 cots.

Cots, and bedding. Each European recruit is supplied on his first arrival in the country, with the following articles of bedding, viz. a cotton carpet 6 feet long and 3 wide, which is afterwards kept up at his own expence; also biennially with a cotton quilt 7⅛ feet long, by 4⅛ broad, stuffed with 2 lbs of cotton; the cots in use are of iron, and are 6 feet 2 inches long, by 3 feet broad; they are removed once a week into the square, for the purpose of the barracks being thoroughly cleared out, when the floors are swept, washed and scrubbed.

Diet of the soldiers. The diet of the soldiers is as follows,

Dinner on Sunday,.....	*Beef*,	Thursday.....	*Beef*,
do. „ Monday,.....	*Mutton*,	Friday,.....	*Mutton*,
do. „ Tuesday.....	*Beef*,	Saturday,.....	*Pork*,
do. „ Wednesday....	*Mutton*,		

with either tea or coffee, cowheels, sausages, eggs, fish, butter and hoppers for breakfast; and those who desire it can have an equally substantial supper.

The provisions are good and wholesome, and are regularly

inspected by a committee of non-commissioned officers and men, before being served out.

Solitary cells. The solitary cells situated about three-quarters of a mile from the centre of the cantonment, are small square puckah buildings ten in number, each 8 feet square, having a small part divided off for the purpose of washing, they are ventilated by means of windows at the top, which afford a partial light, and they are thoroughly cleaned out every morning.

Effects of solitary confinement on health. The effects of prolonged solitary confinement appear to be debilitating in the extreme, and men confined for any length of time lose flesh, the appetite fails, ordinary food is nauseated, the bowels become torpid and rheumatic pains are complained of; on being released they appear listless, gloomy and indifferent to every thing, and are generally either received into hospital, or kept on the convalescent list for some weeks unfit for duty. This however was the result of the punishment, under the former mode of carrying it into effect, when the diet and confinement were rigorous in the extreme.

Improved system of carrying the punishment into effect. Of late Medical Officers have been allowed to order such moderate increase of diet as may be requisite for the preservation of the prisoners health, and in place of lengthened periods of solitary imprisonment, extending from one to twelve months, the present system only allows every alternate month to be solitary.

Every man sentenced by a general court martial to be confined for a longer period than six weeks, is from the first allowed a pint and a half of good mutton broth daily, in addition to a pound and a half of bread, besides conjee water as drink; and is permitted to take exercise near his cell for an hour every morning, in the presence of a non-commissioned officer. That this system which has been in operation but a

short time, will work well, and that the prisoners will sooner be able to return to duty after confinement, there is every reason to expect.

The men in the cells, besides being visited by their company officers, are seen by the surgeon daily, and when sick are always removed into hospital.

Cantonment Hospital. The cantonment hospital is eligibly situated near the barracks, and is raised 5½ feet from the ground, it enjoys a free circulation of air though surrounded by an outer wall.

There are two principal wards, and in the event of increased numbers of sick, the enclosed verandahs may likewise be occupied, but under ordinary circumstances the hospital is quite sufficient for the sick of the cantonment, and of a Battalion of Artillery, being capable of containing 36 cots at the distance of three feet a part; there are also two closets for cases requiring seclusion, a surgery, store rooms and dead room, as well as a ward for women and children.

The wards are cleaned out and washed once a week, as an established rule, and oftener if necessary.

The drains from the building are kept in good repair, and all obstructions removed.

Such men as are able, are permitted to take exercise in the cool of the morning and evening, on the terraced roof of the hospital, and others walk outside under the care of a non-commissioned officer, or are sent out in doolies. There is a convalescent list, but no convalescent ward.

Diet of the Sick. The diet for the European sick is provided by the Commissariat Department, a conicopoly being attached to the hospital, and the medical officer inspects the quality of the provisions, and can order any particular article of diet requisite for the patients.

Lines of the Native Foot Artillery. The lines of the Golundauze, or Native Foot Artillery, are situated on the south side of the cantonment, the men are comfortably hutted, and the lines are perfectly clean and dry.

Native Hospital. The native hospital is placed on an elevated, and open part of the cantonment, within a convenient distance of the Golundauze lines, and is built of brick and chunam. It can conveniently hold from 25 to 35 cots, and is appropriated for the reception of the sick of the native battalion, likewise for those of the establishment of gun lascars, and bullock drivers, and all authorized public followers who apply for medical assistance.

Prevailing Diseases. The prevailing diseases among the European soldiers at the station, are principally *fever*, *dysentery*, and *liver complaints*. *See tables of disease appended.*

Hot Season. The hot season is by no means the most unhealthy period of the year, as might at first be supposed, the barracks are provided with tatties during the land wind, and the men are not allowed to go out from 10 A. M., till 4 P. M.; every indulgence however, consistent with health and discipline, is shewn them.

Amusements. A library is attached to each battalion, with a reading room and coffee room, and inducements are held out to the uneducated to attend the regimental schools. The games of cricket, long bullets, bowls and fives are encouraged, and the men are permitted to bathe in the Adyar at proper hours.

Were it not for the use of Arrack, and other more deleterious spirits, in which so many indulge to excess, the life of the soldier in India would not only be prolonged, but likewise rendered more happy than at present, but the abuse of stimulants of various kinds leads to other vices, which though slowly yet surely, undermine both his health and happiness.

The effects of the north-east monsoon, on the health of the troops.

The north-east monsoon is more particularly the period of the year when the hospitals become filled, but whether this is owing to miasmata generated in the heavy rains, or to some other cause, is uncertain, but such is the fact, and the more grave and fatal forms of disease are most rife between October and January.

Health of the Wives and Children of the Soldiers

The wives and children of the soldiers also suffer much from disease, and it is a common and true remark, that the latter seldom attain to adult age in this climate, and such of them who do, never present the robust muscular frame of their parents, but assimilate more in appearance and character to the Eurasian; this effect though chiefly attributable to climate and imprudent exposure, is no doubt partly owing to improper diet, but whatever the causes may be, the degeneracy is but too obvious.

Births Marriages and Deaths.

Subjoined are tables of births, marriages and deaths, made out as correctly as circumstances allow, but the number of deaths in children cannot be accurately ascertained, from many not having been registered.

Table of Marriages, Births, and Deaths in the Cantonment of Saint Thomas's Mount, for Six years, ending in 1836.

			European Protestants.						European Catholics.						Total Europeans.	Native Protestants.						Native Catholics.						Total Natives.
			1831.	1832.	1833.	1834.	1835.	1836.	1831.	1832.	1833.	1834	1835.	1836.		1831.	1832.	1833.	1834.	1835.	1836.	183	1832.	1833.	1834.	1835.	1836.	
Marriages			30	33	25	26	30	30	4	2	3	5	5	3	196	0	2	3	0	3	0							
Births.	Legitimate.	Male.	11	28	28	41	40	16	6	5	4	10	7	5	201	2	1	1	0	2	3							
		Female.	8	18	30	32	27	15	15	7	5	5	6	4	172	4	1	2	1	0	1							
	Illegitimate.	Male.	0	0	0	1	1	0	1	0	0	1	1	0	5	0	0	1	1	1	0							
		Female.	0	0	0	0	2	1	1	0	0	0	0	0	4	0	1	1	0	0	0							
		Total Births	19	46	58	74	70	32	23	12	9	16	14	9	382	6	3	5	2	3	4							
Deaths.	Men.		15	7	7	10	5	4	0	0	0	0	0	0	48	0	2	1	2	0	0							
	Women.		5	6	6	4	6	7	1	0	0	0	0	0	55	2	3	1	2	2	4							
	Children.	Under Six months.	1	5	7	4	6	8	1	1	0	1	0	0	34	0	0	0	2	1	0							
		From 6 months to one year..	3	3	3	3	6	8	1	2	0	0	0	0	24	0	0	0	0	0	0							
		From 1 year to 3 years	4	2	5	3	11	7	2	1	0	1	0	0	36	0	0	0	0	0	0							
		Above 3 years	7	4	7	3	5	1	0	1	0	0	0	0	28	0	0	0	0	0	0							
		Total Deaths	35	27	35	27	39	30	5	5	0	2	0	0	205	2	5	2	6	3	4							

Not obtainable.

Health of the European Officers and their families.

Only two deaths have occurred amongst the officers, during a period of five years ending in December 1836, neither of which were attributable to climate; one being the consequence of prolonged intemperate habits, and the other of a general breaking up of the constitution; in the same period no death occurred amongst the officers' wives; and only two officers' children died, both from dentition.

Native Population.

The native population of the Mount and its immediate vicinity in 1837, was 17,720, the following being the proportions of each caste respectively.

Mussulmans	3,500
Gentoos	3,200
Malabar	4,520
Pariahs	6,500

Epidemic Diseases.

No epidemic has prevailed of late years; small pox is but rarely met with in the neighbouring district, vaccination being very generally kept up, and the prejudices of the people against this prophylatic, appear to be fast giving way. Cholera seldom makes its appearance, and then only in a sporadic form. The chief diseases from which the people appear to suffer are *fever* of various types, *dysentery, diarrhœa, pulmonary complaints, scrofula, leprosy* and other *cutaneous diseases, cachexia* and *syphilis*. For the diseases of the native soldiery, *see tables appended.*

Epizooties. Horses.

In the B Troop of Horse Artillery at this station, there have been admitted into the Veterinary hospital from 1st February 1835, to 30th October 1836, 223 horses, and out of that number only 26 have been affected with acute diseases, viz.

	Deaths.
1 Dysentery	0
2 Catarrh	0
19 Gripes	1

1 Fever	0
1 Inflammation of Kidneys, Lungs, and Bronchia	1
1 Liver disease	1
1 Ruptured Intestine	1
Total 26	4 Deaths.

The remaining 197, were cases of accidents, bruises, mange, &c. so that the mortality would appear to have borne but a very small proportion to the total number. This healthy state of the troop horses is owing to the excellent system of management in use, attention to food, regular exercise, &c.

Bullocks. The bullocks employed for the foot Artillery guns are subject to various diseases such as, affections of the *liver, cowpox, tympanitic swelling* of the *belly, dysentery, bloody urine* and *dyspnœa.*

Great care is taken of these useful animals; they are received into the Artillery at six or seven years of age, and continue fit for work for eight or ten years.

Dogs. Hydrophobia seldom occurs at the station, all dogs found prowling out of doors in the hot season being destroyed; worms and dysentery are very often met with in dogs, and the distemper so called, is likewise at times very prevalent amongst them, particularly in those of the European breed.

EUROPEAN HORSE ARTILLERY.

No. 18.—*Table exhibiting the number of Admissions and Deaths, from the principal Classes of disease, from* 1829 *to* 1838, *exclusive of the year* 1831.

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1,721. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each Class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total Deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers	Febris ephemera	63	0	90	0	199	2	167	0	366	2	21 ·266	0 ·546
	,, intermitt.	20	0	23	0								
	,, tertiana	4	0	11	0								
	,, remittens.	85	0	23	0								
	,, continua	27	2	20	0								
Cholera		19	4	4	1	19	4	4	1	23	5	1 ·336	21 ·739
Diseases of the Abdominal viscera	Diarrhœa	57	0	112	3	128	3	217	8	345	11	20 ·046	3 ·188
	Dysenteria acuta et chronica	71	3	105	6								
	Hepatitis acuta et chronica	153	7	146	5	153	7	146	5	299	12	17 ·373	4 ·013
Diseases of the Lungs and Heart	Catarrhus	29	0	45	0	52	0	75	3	127	3	7 ·379	2 ·362
	Asthma	3	0	0	0								
	Phthisis pulmonalis	0	0	0	0								
	Hœmoptysis	0	0	0	0								
	Pleuritis	0	0	0	0								
	Pneumonia	18	0	30	3								
	Carditis	0	0	0	0								
	Palpitatio	0	0	0	0								
	Dyspnœa	2	0	0	0								
Rheumatic affections	Rheumatismus acutus et chronicus	148	1	119	1	148	1	119	1	267	2	15 ·514	0 ·749
Other diseases		1035	7	1411	6	1035	7	1411	6	2446	13	142 ·126	0 ·531
Total		1734	24	2139	24	1734	24	2139	24	3873	48	225 ·013	1 ·239

Remarks on the table of diseases.

The foregoing table shows the nature of the *more important* diseases, which have occurred amongst the soldiers of the Horse Artillery, the admissions from which are not numerous, nor is the mortality great, an evidence of the superior healthiness of this class of men, compared with the other European soldiery. The principal exciting cause of the acute forms of bowel complaints and hepatitis, and of fevers, mentioned by the Medical Officers in charge of the Horse Artillery, is indulgence in the use of ardent spirits, and the men themselves frequently make the remark "that they work hard, drink hard, and do their duty." In the treatment of these diseases active antiphlogistic measures are indispensable, the soldiers of this arm of the force, being young robust men, selected with great care for this particular service; depletive measures are in consequence stated to be more urgently required in them, than in other European troops.

The percentage of admissions to strength, is considerably above the average shown in the general table for the division, No. 23, given at the end of this report, but this is accounted for from the numerous cases of contusions, and other injuries, to which these men, from the nature of their duties, are liable, and which are included under the head "Other diseases;"—these cases form a large proportion of the total admissions. The ratio of deaths to sick, and to strength, is however much below that in the general table—viz. the deaths to sick, having been 1·239, and to strength, 2·789.—In 13 deaths under the head "Other diseases," are included one from the explosion of a gun, one from the bursting of a powder flask, one from contusion, one from aneurisma, two from syphilis consecutiva, one from cephalalgia, and one from icterus.

EUROPEAN FOOT ARTILLERY.

No. 19.—*Table exhibiting the Number of Admissions and Deaths, from the principal Classes of disease, for ten years, from* 1829 *to* 1838.

2nd Battalion, from 1830 to 1839 3rd Battalion, from 1829 to 1835		1829 to 1838. Aggregate strength 5,152.				Admissions & deaths from each class of Disease.				Total admissions from each Class.	Total Deaths from each Class.	Average percentage of sick to strength.	Average percentage of deaths to sick.
CLASSES.	DISEASES.	1st Half.		2d Half.		1st Half.		2d Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers.....	Febris ephemera	295	1	260	0	521	4	510	8	1031	12	19 ·895	1 ·163
	„ intermittens	197	3	83	2								
	„ tertiana....	32	0	13	0								
	„ remittens...	51	0	79	5								
	„ continua....	35	0	75	1								
	Cholera	7	1	6	2	7	1	6	2	13	3	0 ·250	23 ·076
Diseases of the Abdominal viscera.....	Diarrhœa.....	116	0	224	6	300	12	584	36	884	48	17 ·059	5 ·429
	Dysenteria acuta et chronica.	184	12	360	30								
	Hepatitis acuta et chronica...	301	12	295	13	301	12	293	12	599	24	11 ·630	4 ·005
Diseases of the Lungs and Heart	Catarrhus	49	2	57	4	94	2	120	5	214	12	4 ·129	5 ·607
	Asthma.....	12	0	12	0								
	Phthisis pulmonalis.....	6	3	9	0								
	Hœmoptysis....	1	0	2	0								
	Pleuritis.....	0	0	0	0								
	Pneumonia.....	18	2	32	1								
	Carditis	2	0	1	0								
	Palpitatio.....	4	0	7	0								
	Dyspnœa.....	2	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus	200	0	202	3	200	0	202	3	402	3	7 ·757	0 ·718
	Other diseases..	1917	16	2438	7	1917	16	2438	7	4355	23	84 ·040	0 ·528
	Total.....	3310	52	4158	73	3310	52	1158	73	7498	125	144 .693	1 .667

Remarks on the table of diseases.

The table of diseases for the European Foot Artillery, gives a very favourable view of the general health of these troops, the proportion of the admissions, but especially of the mortality, being much below the average shown in the general table No. 23, already referred to; the per-centage of deaths to admissions being only 1·667, and to strength 2·412, whereas the general average amounted to 3·768, and 5·870 respectively. This mortality though small, would have been still lower, were it not that numerous bad cases of chronic disease, are sent to the coast from out stations, for change of air, many of which are treated in this hospital; and from acute diseases occurring amongst recruits on landing, as shown by the extracts from the medical reports hereafter given. On the other hand, as tending to reduce

the amount of sickness and mortality, it may be observed, that as the duties of the Artillery require more robust health, and a greater degree of physical strength, than those of other foot soldiers, they are consequently, when unequal to Artillery duty, either discharged, or allowed to be transferred to the Madras European Regiments;—the Artillery being kept at all times in a perfect state of efficiency.

Several medical officers have been in charge, within the period to which these remarks refer, viz. from 1829 to 1838, and although they have differed much in their treatment of the principal diseases, such as fever, dysentery and hepatitis, they are all agreed as to the chief exciting causes of these complaints, viz:, exposure to the sun, and the intemperate use of spirituous liquors.

The following extracts from two of the medical officers reports, for the years 1833 and 34, containing some important observations on this subject, are here given.

"I stated in my last report, what I conceived to be the most general causes of these three destructive diseases, and mentioned intemperance as the principal; and the past half year does not enable me to alter that opinion.—But admitting intemperance to be the most influential cause of the speedy destruction of life, in the hot climate of India, the question is, how to remedy the evil, and this I do not pretend to solve, but am fully satisfied, that the present authorized system of conducting canteens is pregnant with the most ruinous consequences to the health of the troops. It holds out temptation to drinking in one hand, and punishment in the other, which is trying a soldier's resolution and forbearance, by too severe a test."

"Means have been taken to guard the recruits against the evils of exposure to the sun, by confining them to the barracks during the heat of the day; and instead of the daily allowance of two drams of arrack, they have only one, given after dinner; for of all the methods that could have been adopt-

ed to make men drunkards, that of serving out drams in the morning before breakfast, is the best that could possibly have been devised. Seeing the evils which prevail from the vice of inebriety, and persuaded as every one is, that it destroys even more lives than the climate, it is wonderful that a custom so pernicious in itself, and so universally acknowledged as leading to habitual drunkenness, should not be discontinued."*

In elucidation of the nature and treatment of some of the principal diseases, the following remarks taken from the half yearly medical reports, of the 3d Battalion of Artillery, for the years 1833, 34, and 35, are extracted, being considered of much value.

"Intermittents have been prevalent, but owe their origin to causes which do not exist at this station, and were confined to such men as had been employed in the expedition to Malacca, in 1831, and were exposed to the influence of marsh miasm.

"In the treatment of intermittents, the first object was to have the stomach and bowels freed from all accumulations, and then to prescribe quinine during the intervals, in doses of three grains, every two or three hours, diaphoretics were ordered in the hot fit, and determination to particular organs relieved by local blood-letting, by means of leeches; besides which blisters were used, and Dr. Twining's spleen mixture."

"The treatment which was had recourse to in remittent fever, and which has been a comparatively rare disease, consisted in the early stages, of general blood letting, and the exhibition of active purgatives, and occasional emetics; but besides the first general bleeding, much benefit often results, in the strong and robust, from repeating it at the height of the next exacerbation, headache was met by the ap-

* The system of issuing spirit rations to European troops, has been discontinued since these remarks were written, compensation being granted in lieu of them, which at present forms a part of the soldier's consolidated pay—Whatever spirits they now receive, either at the Regimental Canteens, or from the Commissariat Department, and which is restricted as to quantity, is paid for at an established rate, laid down in G. O.

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plication of leeches; at the same time that these measures were employed, calomel either in large or frequently repeated small doses, combined with the powder of antimony, was given till the intestinal and biliary secretions improved, or ptyalism ensued, purgatives and sudorifics being at the same time in frequent use; where the biliary organs appeared at fault, a blister was applied over the right hypochondrium to excite the liver to more healthy action. As soon as an intermission could be obtained, immediate advantage was taken of it to prescribe the sulphate of quinine." 1st July 1833.

"Dysentery, though not exactly next to cholera in the list of diseases, is at least next to it in importance, and must ever command serious attention. In the treatment of acute dysentery, it is the almost invariable rule to employ venesection in the first instance, even where the constitutional disturbance may not be great, and the pulse but little if at all affected, and to be guided in repeating it by the appearance of the blood, or urgency of the symptoms. It is a practice which will never have to be regretted, while, on the other hand, if it is delayed, awaiting the developement of constitutional symptoms, or excitement of the pulse, we shall almost certainly err. Pain, or the sense of soreness in the abdomen, the frequency and appearance of the stools, and the state of the tongue, are the chief points for observation, and on no account should the patient's word be trusted regarding the absence of pain, but its existence or not, should be ascertained by means of pressure on the abdomen, when pain of which the patient was not before sensible, will often be complained of. The symptom of pain or tenderness in the abdomen, no matter how confined in extent, is always a cause of solicitude, and as little impression is made upon it by general blood letting, the free and repeated application of leeches is resorted to, and persevered in till all sense of pain and tenderness have subsided. In combination with those means, full doses of calomel and ipecacuanha, are usually given at night, or full doses of calomel and Dover's powder; and during the day, smaller doses of ipeca-

cuanha are so prescribed as to keep up a constant sense of nausea. Where tenesmus is severe, leeches to the anus, fomentations, and suppositories of opium, often prove of great benefit. It is customary to precede the use of these medicines by a dose of some laxative, but, in inflammatory cases, it is seldom repeated, as laxatives often aggravate the sufferings of the patient, the unhealthy appearance of the stools being the result of morbid secretions, not to be improved by purgatives, but by removing the disease on which they depend. In cases dependent upon accumulation in the intestines, and free from inflammatory symptoms, purgatives are of use, and are frequently employed. After inflammatory symptoms have been subdued, and the disease appears to be protracted by a want of tone in the intestines, the nitric acid mixture, combined with an opiate, is administered, and seems to be well adapted for the advanced stages of dysentery, and for subduing the irritability arising from loss of tone in the bowels."

"It would not be difficult to assign other reasons than the influence of climate, for the occurrence of many of the cases of remittent fever, though many instances have occurred of men being taken suddenly ill, without any previous indiscretion on their part. The fever was usually characterized by severe headache, pain at the pit of the stomach, nausea and vomiting, with a costive state of the bowels, great heat of skin, and frequency of pulse, pains in all the joints, and in the back or loins; some attacks were preceded by a sense of chilliness, but this was by no means general. Although the blood scarcely ever exhibited the usual inflammatory appearances, venesection, where the symptoms indicated increased arterial action, was the first measure adopted, its repetition, and the quantity to be taken away, being regulated by its effect upon the vascular system; next to bloodletting, purgatives were held in the highest estimation, and by the united timely use of both, it was often remarkable how much the force of the fever was subdued, in the early stage. Purgatives

are considered of the greatest importance, and calomel, than which we have not a better, or more powerful purgative in remittent fever, was given in large doses at the commencement, to open the bowels freely, and to bring the system the more readily under its influence ; combined with the powder of antimony, it was continued in smaller doses every two or three hours, until a remission took place, or salivation was induced. If after the free use of general and local blood-letting, and purgatives, a remission was not obtained, ptyalism was hailed as a precursor to an abatement of the febrile symptoms ; not that the fact, of the system being brought under the mercurial influence, was the cause of the subsidence of the fever, but rather that it was indicative of the system being less under the dominion of the febrile action. From present experience, it would not be deemed prudent, not to push the mercury to salivation, when the symptoms call for its continuance, but how often is a severe ptyalism, and its consequence, a tedious convalescence, to be regretted? The ill effect however, of the indiscriminate use of mercury is particularly observed, in cases where, instead of a free salivation, there is a mere spitting, with a pale and swollen appearance of the gums, or continued morbid heat and dryness of skin, with restlessness, and a quick irritable pulse ; in this state, the mercury contributes in a marked manner towards the aggravation of the symptoms, whereas by temporizing at the commencement of the attack, by means of saline antimonials and laxatives, sponging the body with vinegar and water, and guarding against, or removing local determinations, to particular organs, by leeches and the application of blisters, and repeating those measures according to the intensity of the disorder, this may be prevented."

" These observations are also applicable, in some degree, to certain states of inflammation of the liver."

" Every step taken was with the view of obtaining a remission, that recourse might be had to the best, and in many c ases

the only expedient for preventing the recurrence of the exacerbations, the use of quinine."

"In one instance only, was the depleting plan followed by unfavorable symptoms, and in this case soon after a moderate bleeding and free purging, the patient fell into a state of extreme debility, from which however he recovered by the administration of quinine, in combination with ammonia frequently repeated, and wine."

Hepatitis. "In Acute hepatitis there has been no deviation from the plan of treatment formerly described, namely, general and local blood-letting, purgatives, and blisters; and while engaged in subduing the inflammatory symptoms by depletion, mercury was given, with the view of restoring the healthy action of the liver." Dated 31st December, 1833.

"On comparing the half yearly returns of sick for 1834, it will be found, that the admissions have been considerably increased in the second half, by the arrival of recruits from England. Six deaths have taken place, five among the recruits, and one, the case of a man whose constitution was worn out by a complication of maladies, and who was about to be discharged from the service."

"From the fact of Europeans recently arriving in India, being so liable to bowel complaints, dysentery and diarrhœa have accordingly formed a great portion of the admissions into hospital. The influence which the climate has in predisposing the constitution to disease, is of itself sufficient to induce intestinal, hepatic, and febrile diseases, but none who are acquainted with the habits of soldiers, will question the effects of exposure to the sun, and intemperance, in producing those diseases regarded as peculiar to the country, notwithstanding the care which is taken to guard them against exposure to the one, and to prevent their having free access to the other." Dated 31st December 1834.

"On comparing the return of the 1st half of the year 1835,

with those of similar preceding periods, a striking difference is observed in the number of sick, which is much greater than usual. The sickness has been confined to a company of the Battalion, which returned to head quarters in January last, the men of which had suffered severely from the climate of Masulipatam; disease has however much abated since their removal from that station, and many, who arrived in a wretched condition, have recovered their health and returned to duty; a few however are still in a precarious state, whilst others, without any marked disease upon them, have continued pale and delicate, and are liable to visceral affections; but on the whole, there has been a decided, and manifest change for the better, in that part of the battalion."

"There have been three deaths in the half year, one from chronic dysentery, one from the effects of long continued intermittent fever, and the third from extensive pulmonary disease. Hepatic and dysenteric affections, have been comparatively rare, while the prevailing diseases have been fevers, of different types, among which intermittents bear a large proportion, produced by malaria, or some peculiarities of the climate of Masulipatam. Fever has either been of a simple form, or complicated with visceral affections, which react upon the system, aggravating its disordered state, and thereby rendering the original disease more obstinate. The tendency to relapse at particular periods has been great, while the recurrence of the disease, on many occasions, is at intervals so remote, that the term is of doubtful application, and the disease is frequently excited by apparently very slight causes. In cases where, either from the particular obstinacy of the disease, or from its more malignant character, lesions in the structure of the abdominal viscera had taken place, they were characterized by a peculiarly sallow, oedematous countenance, by fulness and distention, with weight and pain of the epigastrium and hypochondria, at times combined with general dropsy, and frequent and urgent dyspnœa, but more frequently with chronic bowel complaints; and again, in some cases, instead of a number of organs being implicated in the dis-

eased action, one only of the important viscera was affected. When the liver was the organ concerned, the mischief done to the general health was found to be great, and the progress towards recovery, was tardy in the extreme; while simple enlargement of the spleen, without other complications, had but little apparent influence on the general health."

"Several cases of enlarged spleen, have been met with among the wives, of the party from Masulipatam, which disease appears to have had little influence on their general health, but in all, the menstrual secretion became obstructed. It has happened in some cases, where the spleen had been so far reduced in size by treatment, as to be scarcely discernible, that it has rapidly enlarged, during a single paroxysm, so as to be felt projecting under the false ribs."

"In simple cases of intermittent fever, after the bowels have been opened, cinchona bark, was found to be successful in removing the disease, unless when the patient was again exposed to atmospherical causes, or other circumstances capable of producing a recurrence of the complaint; but valuable a medicine as the bark is justly esteemed to be, in intermittents, it was never administered after visceral disease appeared; in cases of this description, the first object being to restore the healthy functions of the diseased organ, so essential to the patient's recovery."

"In cases complicated with affections of the liver, characterized by enlargement of the organ, and attended with great constitutional excitement, though perhaps with no pain, general blood-letting, leeches to the epigastric and right hypochondriac regions, blisters and full doses of calomel, followed by purgatives, were prescribed; and upon the mitigation of the more urgent symptoms, quinine or the arsenical solution, were given to prevent the recurrence of the ague."

"In less urgent cases, general blood-letting was dispensed with; and in simple engorgement of the viscus, that is, when

constitutional excitement did not exist in the interval, the quinine or arsenical solution were at once prescribed, to prevent the evil effects of a recurrence of the paroxysms; where chronic bowel complaints coexisted, with other affections of the viscera, no good resulted from attempting to suppress them; the first object being the removal of visceral disease, and this was more certainly attained by the employment, in addition to other remedies, of leeches over the course of the colon, or diseased viscus, and emollient and anodyne enemata; where dropsy existed, diuretics were combined with the other usual remedies. In spleen cases, attended with tenderness in the organ, repeated local bleedings from the left hypochondriac region were employed, while blisters, and setons, were afterwards resorted to; and a free state of the bowels was kept up by the spleen mixture, and a combination of aloes, with the sulphate of iron. In cases of sanguineous congestion, and where all inflammatory symptoms had subsided, the iodine, from its powers in promoting absorption, was pointed out by Mr. Cuddy, as an appropriate remedy, and was employed with marked benefit, in solution, and in the form of ointment, rubbed in once or twice a day, over the enlarged gland."—dated 30th June, 1835.

NATIVE FOOT ARTILLERY, OR GOLUNDAUZE. 4th BATTALION.

No. 20.—*Table exhibiting the Number of Admissions and Deaths, from the principal Classes of Disease, from* 1829 *to* 1838, *exclusive of* 1832.

CLASSES.	DISEASES.	9 years. Aggregate strength 4,417. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers.....	Febris ephemera	71	1	56	0								
	„ intermittens	56	3	28	0								
	„ tertiana.....	1	0	5	0	150	8	107	5	257	13	5·818	5·058
	„ remittens...	10	2	4	0								
	„ continua....	12	2	14	5								
	Cholera.....	4	3	13	2	4	3	13	2	17	5	0·384	29·411
Diseases of the Abdominal viscera.....	Diarrhœa.....	8	1	7	0								
	Dysenteria acuta et chronica.	9	3	11	0	17	4	18	0	35	4	0·792	11·428
	Hepatitis acuta et chronica...	4	0	0	0	4	0	0	0	4	0	0·090	0·0
Diseases of the Lungs and heart.	Catarrhus.....	16	1	13	0								
	Asthma.....	7	1	6	1								
	Phthisis pulmonalis.....	6	1	2	2								
	Hœmoptysis....	0	0	0	0	32	5	21	3	53	8	1·199	15·094
	Pleuritis.....	0	0	0	0								
	Pneumonia.....	2	2	0	0								
	Carditis.....	0	0	0	0								
	Palpitatio.....	1	0	0	0								
	Dyspnœa.....	0	0	0	0								
Rheumatic affections.	Rheumat. acutus et chronicus.	72	1	48	0	72	1	48	0	120	1	2·716	0·833
	Other diseases..	624	13	523	17	62	13	523	17	1147	30	25·967	2·615
	Total....	903	32	730	27	90	34	730	27	1633	61	36·970	3·735

The table of diseases for the Native Foot Artillery, exhibits a small amount of sickness and mortality, although they have been much employed on detachment duty, at the stations on the Tenasserim Coast, and other eastern settlements; the per centage of sick to strength, 36·970, and of deaths to strength, 1·380, being considerably under the average shown in the general table No. 25. The majority of cases, under the head "Other diseases," consisted of local affections, such as contusions, ulcers, and itch, and of the 30 deaths under that head, six were from atrophia, (five of whom were transferred from the detachment at Singapore to the Mount,) one from beriberi, one from apostema lumborum, one from ulcus grave, one from hydrothorax, (also transferred from Singapore;) there were besides these, two sudden deaths, supposed to be from

ruptured blood vessels, one from aneurisma, one from dyspepsia, and one from hœmorrhois; the average proportion of deaths to sick treated, has it will be apparent, been much increased by these transfers.

POONAMALLEE.

Description of. Poonamallee, the Dépôt of Her Majesty's troops at this Presidency, is situated 13 miles due west of Fort St. George, and about four or five north of St. Thomas's Mount; the country is flat, and but little raised above the level of the sea; and the land in the vicinity though sandy, is much of it under rice cultivation.

The cantonment is about half a mile square, and the great western military road from Madras runs through it. It is well drained, and there are no accumulations of stagnant water, or other sources of malaria, which circumstances, together with the openness of the surrounding country, permitting the sea breeze to pervade all the houses, contribute much to the salubrity of the place; and it has accordingly always been found to be a remarkably healthy station.

Barracks. The barracks are situated at the west end of the cantonment, forming an oblong square, they are provided with outer and inner verandahs, the outer one being enclosed. The building is capable of containing 500 troops, is well ventilated, and has the requisite out offices attached to it at a convenient distance, there is also a supply of good water in the immediate vicinity.

Fort. The old fort of Poonamallee lies to the eastward of the barracks, distant 400 yards; it is of a square form, being 175 yards long, by 142 broad, and surrounded by a rampart 18 feet high; cells have been erected on each of the four corner bastions, for men sentenced to solitary confinement; and within the fort are a magazine, ranges of store rooms for the clothing and arms, of Her Majesty's troops, and godowns for barrack supplies.

Hospital. The hospital which is situated within the fort, is a pent roofed and tiled building, forming two sides of a square, one running north and south, in length 120 yards, 16 feet in breadth, and 10½ feet high; it is divided into seven wards, four of which are for male patients, each capable of containing 20 men; two for European females, and one for the sick of the detachment of sepoys on duty here. The building is encircled by a verandah. The other range which runs east and west, is of nearly the same dimensions, and is divided into several apartments, affording accommodation for 80 patients. At the north-east angle are the dispensary and store rooms, cookrooms and other offices being likewise attached to it. Convalescents in hospital take exercise on the ramparts of the fort, which from being well raised are open to the sea breeze.

Some of the officer's houses are situated in the cantonment, and others are detached, at a short distance, in the neighbourhood.

Village. The pettah, or native village, lies south-east of the fort, distant about 600 yards, it is tolerably airy and clean, the general bazaar forming the principal street; the native population amounts to about 7,000, exclusive of 200 sepoys with their families. The inhabitants are generally cultivators.

Troops. The number of troops at the depôt, consisting chiefly of recruits arriving from England, and invalided, or time expired men returning home, varies from time to time very considerably, being usually from 100, to 500 men.

Recruits generally arrive from England in the months of September and October, and remain at the depôt till after the north-east monsoon; and invalided men, come down from the stations in the interior, about the end of the year, for the purpose of being sent home.

Climate. The climate does not differ materially from that of Madras, and the neighbouring station of the Mount.

Diseases. The diseases to which the European troops are most subject, are *fevers, bowel complaints* and *hepatic diseases*, and the principal causes of these affections, are exposure to heat, and the abuse of spirituous liquors.

EUROPEAN TROOPS.

No. 21.—*Table exhibiting the Number of Admissions and Deaths from the principal Classes of Disease, for ten years, from* 1829 *to* 1838.

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1,833, 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers	Febris ephemera	0	0	0	0								
	„ intermitteus.	18	0	32	1								
	„ tertiana	0	0	0	0	191	1	393	11	584	8	31 ·860	1 ·339
	„ remittens	12	0	18	1								
	„ continua	161	1	343	5								
	Cholera	2	2	6	3	2	2	6	3	8	5	0 ·436	62 ·500
Diseases of the Abdominal viscera	Diarrhœa	75	2	69	0								
	Dysenteria acuta	99	9	269	12	186	11	349	12	535	23	29 ·187	4 ·299
	„ chronica	12	0	11	0								
	Hepatitis acuta	176	5	153	5	226	5	212	6	438	11	23 ·805	2 ·511
	„ chronica	50	0	59	1								
Diseases of the Lungs and heart	Catarrhus	26	0	50	1								
	Asthma	13	0	5	1								
	Phthisis pulmonalis	14	7	13	7								
	Hœmoptysis	0	0	1	0	219	17	193	12	411	29	22 ·585	7 ·001
	Pleuritis	0	0	0	0								
	Pneumonia	146	9	173	3								
	Carditis	1	0	5	0								
	Palpitatio	6	0	7	0								
	Dyspnœa	13	1	1	0								
Dropsies	Anasarca	8	0	6	1	5	2	17	3	22	5	1 ·200	22 ·727
	Ascites	2	2	11	2								
Rheumatic affections	Rheumat acutus	142	0	142	0	227	2	233	1	460	3	25 ·095	0 ·652
	„ chronicus	85	2	91	1								
Venereal affections	Syphilis primitiva	53	0	111	0								
	„ consecutiva	4	0	8	0	72	0	196	0	268	0	14 ·630	0 ·000
	Gonorrhœa	13	0	69	0								
	Hernia humoralis	2	0	8	0								
	Other diseases	744	12	952	7	744	12	952	7	1696	19	92 ·525	1 ·120
	Total	1872	52	2553	51	1872	52	2553	51	4425	103	241 ·407	2 ·327

Remarks on the preceding table.

The acute forms of disease are almost exclusively confined to the young and recently arrived recruits, whilst those of a chronic nature such as diarrhœa, chronic dysentery and hepatitis, occur amongst the invalids or sickly men sent from out stations, either for change of air, or for the purpose of being invalided. Chronic affections of the chest, which by the accompanying table will be observed to be very frequent, chronic rheumatism, anasarca, ascites and syphilis consecutiva, have also occurred, almost exclusively amongst the latter description of men.

The great proportion of sickness to strength, upwards of 240 per cent, is fully accounted for, from a considerable part of the troops being worn out men, from disease and length of residence in India, and many of them are therefore on the sick report from the time of their arrival at the station, until their departure.

The mortality however, will be observed not to be above the usual ratio, viz. 2⅔ per cent on the sick treated, and little more than 5⅓ per cent, on the strength.

The sick both of the recruits and invalids, have been included in the same returns, it was therefore found impossible to shew separately, the diseases which have occurred in each of these bodies of men.

The table shews the whole amount of disease, and mortality, for a period of ten years, with the percentage of sick to strength, and of deaths to sick treated. A few observations on the nature and treatment of the more important diseases, may be acceptable.

Fever.

The cases of intermittent, and remittent fever, have occurred almost exclusively in soldiers who have arrived from up-country stations, particularly Bangalore and Masulipatam, at which places these diseases were contracted. The intermittents have been, for the most part, of a chronic

nature; and remittents were generally contracted on the march to the station.

Remittent fevers have been treated by moderate depletion and purgatives, previous to the exhibition of bark or quinine; in intermittents it was observed, that although bark and quinine failed in checking, or subduing the disease, at the stations where the fever had been contracted, a short residence at Poonamallee enabled these remedies to produce their specific effect, a strong proof of the salubrity of the station; and patients suffering from this disease, have accordingly often been sent to the depôt for change of climate, with the greatest benefit.

The continued form of fever was that most generally met with, and was chiefly occasioned by exposure to heat during the day, and cold at night, and by intemperance. This disease has been confined almost exclusively to recruits, and in the majority of cases, was attended with more or less local inflammation, generally affecting the head, or liver. A remarkable exception however from the usual complication happened in 1836; a body of 225 recruits arrived, in October of that year, and on the 30th of the month, a severe hurricane with a heavy fall of rain, having occurred, as noticed in the Presidency Report, a short time afterwards catarrhs became general amongst the recruits, and twenty-eight cases of severe fever were admitted into hospital, complicated with pneumonia.

Many of the cases of continued fever have been cut short by bleeding, either general or local as indicated by the symptoms, the other means employed consisted in the exhibition of mercurial purgatives, and diaphoretics, with a small dose of calomel and antimony at bed time. In mild cases, or those arising from simple excitement, v. s. has not been found necessary, the subordinate measures mentioned, being sufficient to effect a cure; whilst in cases which shewed no disposition to yield to ordinary measures, calomel and antimony were given, to the extent of affecting the system, and with marked success

Of the six fatal cases two occurred in recruits, and the other four in old soldiers; in the latter, acute or subacute disease is frequently excited by the excessive use of spirituous liquors, and indulgence in other irregularities, to which a great many of them are but too prone, and who can therefore ill bear the necessary depleting treatment; in these men local disease is readily re-excited in organs which have been the seat of former lesion, and frequently ends in some of the untoward consequences of inflammation, such as effusion in the head, abscess in the liver, or ulceration of the bowels.

Cholera. Few cases of *cholera* have occurred at this station, and this disease has not been met with at Poonamallee except in a sporadic form, during the period embraced in these remarks, and the fact is worthy of notice, that cholera has not prevailed as an epidemic either at Palaveram, St. Thomas' Mount or Poonamallee in that time; nor has it been epidemic at the latter station since its first general outbreak in India, except in the first half of the year 1822, when 21 cases occurred in a numerical strength of 384 men, and again, in the second half of the year 1825, when there were 20 cases, in a strength of 679 men; in the first instance two deaths took place, and in the second eight.

The causes of this marked immunity from the visitations of cholera, when it has been epidemic several times in the immediate vicinity, is probably inexplicable, but such is the fact.

Diarrhœa. *Diarrhœa* a disease of much importance is, as already remarked, very generally of a chronic nature, occurring in old men from organic disease of the bowels, and of the other abdominal viscera. The treatment in this class of patients is generally merely palliative. This disease however is not unfrequently seen in a different form in recruits, occasioned by cold, intemperance, indulgence in fruits and in toddy, or the fermented juice of the palm tree; in such cases

the disease is speedily checked by a dose of oil, with a few drops of laudanum given in the first instance, and followed by a little calomel, colocynth and hyosciamus, at bedtime; if neglected however it often runs into dysentery, but the purging is generally so profuse as to frighten the patient, and compel him to apply early for treatment.

Dysentery. Another disease of more importance than the preceding, and of frequent occurrence at this station, is *dysentery;* this affection with *hepatitis*, and *fever* of the continued type, being the most prevalent diseases amongst Europeans. The greatest number of cases, and almost all those of a severe and acute nature, have happened amongst the recruits. The exciting causes mentioned by the medical officers, are, exposure to currents of air during the night in barracks, and to the heat of the sun during the day, bathing while heated and in a state of perspiration, excessive indulgence in the use of spirituous liquors, such as toddy, and pariah arrack in which chillies have been infused, and eating unripe fruit of various kinds.

Recruits affected with dysentery generally apply for admission at an early period of the complaint, and have been treated by active depletion, general and local; ipecacuanha in five grain doses, combined with calomel have at the commencement, formed the principal remedies; oily laxatives, and counter irritation over the abdomen by means of blisters, with anodyne and emollient enemata, have also been employed as auxilliaries. In old soldiers depletion is less required, and leeches have been found sufficient, with the above mentioned remedies.

The mortality in acute dysentery, has been a little more than 5½ per cent, in the ten years from 1829 to 1838, while during seven years, from 1820 to 1826 inclusive, it was nearly 7⅛ per cent, or 59 deaths in 808 cases; and in the chronic form, during the last mentioned period, the per centage was fully 15, or 35 deaths in 230 cases, while in the

table for 10 years, only 23 admissions are recorded, and no deaths. The diminution in the number of admissions of the chronic form of this disease, is very remarkable, and involves a question of much importance; can it have resulted from the more sparing use of calomel, and the more general abstraction of blood in the treatment of acute dysentery, and of acute tropical diseases in general, of late years?

Hepatitis. *Hepatitis*, both in the acute and chronic form, is another very frequent disease; it is most generally observed in the first form amongst recruits, although acute attacks have been occasionally excited in old soldiers. The treatment in young men must necessarily be more active, than in the old, and a well timed venesection will frequently remove the complaint in both, but in the one it is more urgently required and better borne, than in the other, and in many instances it is found necessary to repeat it; calomel is given with antimonial powder in equal parts, in three or four grain doses, three times daily, till salivation is produced; it has however been observed, that old soldiers are sooner brought under the influence of the mineral than recruits, and therefore it has been exhibited to them in smaller doses. In many cases venesection may give place to local depletion with propriety and advantage, but in young recruits when the symptoms are well marked, it is imprudent to delay v. s. even for one hour, and in no case of this description, can leeches be trusted to with safety, as a substitute for general depletion.

The percentage of deaths to sick treated in acute hepatitis, has been three per cent, in the ten years ending in 1838, and during the seven years from 1820 to 1826, the ratio of mortality was almost the same.

Chronic hepatitis. Cases of the *chronic form of hepatitis* are always to be met with at the depôt, generally transferred from up-country stations. In the treatment much benefit is derived

from the application of a few leeches, followed by repeated small blisters to the side, or the insertion of a seton, the use of laxatives, tonic bitters and mineral acids, particularly the combination of the nitric and muriatic, the latter remedy being not only given internally, but is also employed externally as a bath, or lotion. In most cases mercury is used chiefly as an alterative, a few grains of blue pill being given occasionally to correct functional derangement, and it has been found, that in most forms of organic disease of the liver, mercury exerts but little other beneficial influence, and therefore is sparingly used.

Of this form of the disease, there have been during the ten years, 190 cases treated, with one death, while during the years from 1820 to 1826, no fewer than 426 cases were admitted, and 21 deaths occurred, or very nearly 5 per cent. The frequency of chronic hepatitis in the latter period, compared with the number which has occurred during the ten years, is a circumstance equally deserving of observation, as the difference in the number of cases of chronic dysentery before remarked, in the same period.

Diseases of the Lungs. By the table it would appear, that chest affections are by no means of unfrequent occurrence. Previous to the year 1833, several of the diseases of the lungs and pleura, were entered under the name of "*Thoracic inflammation*" which, in the accompanying table are included under the head *Pneumonia*, many of them however were merely simple *catarrh*, for after 1830, when the list of diseases was extended, 76 cases of *catarrh* appear on the returns, while there are only 22 of *Pneumonia*; all the deaths under the head *Pneumonia*, happened previous to 1833.

Acute diseases of the lungs are frequently excited in men recently arrived in the country, and well marked, and even severe cases of pneumonia, are by no means unfrequent in old soldiers, though the general observation by authors, that chest affections are more rare amongst Europeans in India, than in England, is quite correct.

In the preceding remarks, an instance is related of fever occurring during the cold season of 1836, complicated with a catarrhal affection, at the same time several cases of severe catarrh, and of pneumonia, were also met with at the depôt. The treatment of these affections, does not appear to differ from that followed in the same diseases in Europe.

Phthisis Pulmonalis. Of *Phthisis pulmonalis* 27 cases are observed in the table, and of this number, 14 of the patients had been in India under four years, in whom the disease had existed previous to arrival in the country, having originated either during the voyage or in Europe; several died in six or eight months after arrival, and two within the short space of one month. In cases of this disease it has frequently been observed, that when tubercular deposition has not gone to any considerable extent, previous to the arrival of the person in India, that the tubercles remain quiescent and unirritating, for on examination of the lungs of patients dying of dysentry, fever, or hepatitic abscess, numerous hard tubercular bodies are often found in the upper lobes of both lungs, which generally appear pale, the surrounding cellular tissue in such cases, not exhibiting any inflammatory appearance, but on the contrary, appearing quite healthy. In some cases however, when the constitution is deeply tainted with the scrophulous diathesis, although the tendency to further deposition becomes checked in a considerable degree, it has been observed, that such persons are very liable to bronchitis, and inflammatory affections of the lungs, during which the tubercles advance to suppuration, though very slowly; such men are frequently in hospital, and several instances are recorded, in which the disease has been progressing in this way, for a period of upwards of ten years. A remarkable case of a pensioner dying of tubercular phthisis, at the advanced age of 97 years, is noticed in one of the reports; the man had been resident in India upward of 60 years, but the history of the case is unfortunately not given.

Rheumatism. *Rheumatism* forms a large proportion of the admissions into the Depôt hospital, both in the acute and

chronic forms; all the cases under the latter head, and a great proportion of those under the former, have been transferred from inland stations, for the purpose of being invalided: the affection in many of them becoming aggravated, and of a more acute character, on the march to Poonamallee.

Rheumatism, in the majority of cases, is an obstinate and distressing complaint, and patients labouring under it, are generally in a debilitated state on their arrival, and have invariably suffered from diseases, in the treatment of which mercury had been freely administered, and a considerable number of them had suffered from primary syphilis.

The articular form of the disease, as already remarked at page 37, is very seldom met with in Europeans, and the joints are but seldom affected with enlargement or effusion; the chronic inflammatory action whatever its nature may be, whether occasioned by the use of mercury as above hinted, which there is every reason to believe is frequently the case, or by a syphilitic taint in the system, is attended by pain, not only around the joints, but in the long bones, especially the *tibia* and *femur*, and bones of the head, which become affectedwith periosteal enlargements; the pain being generally most severe during the early part of the night. Another form of this affection, the least frequent, though perhaps the most obstinate, is when it assumes an intermittent character;—this is met with chiefly in old residents, and in men whose constitutions have become broken down by disease, and who have suffered much from fever. The attacks occur usually every third or fourth day, but patients occasionally remain free from them, for one or two months at a time; severe paroxysms of pain are frequently followed by swellings, or nodes particularly on the bones of the head. In some of these cases the system has been tainted with syphilis, whilst in others the constitution was altogether unaffected with that disease. The term rheumatism would therefore appear to be used in a very undefined manner, it being applied to disease occasioned by the abuse of mercury, to the

effects of syphilis, to both conjoined, and to the sequelæ of malarious poison. It has been found in the intermittent form of rheumatism, that mercury, mineral acids, and the other usual treatment for rheumatic pains, afford but temporary relief; arsenic however has been found highly useful, and quinine given as a tonic in small doses, but especially in larger doses with a view to obtain its anti-periodic influence, has been attended with the best results.

The primary object, in the treatment of that form of the disease following the use of mercury, is to improve the general health of the patient, and this has been best effected by means of the simple and compound decoction of sarsaparilla, bitters, mineral acids, occasional laxatives, and opiates at bedtime to procure rest; with the local application of leeches, blisters, and stimulating liniments; flannel rollers to the limbs have also produced much benefit in such cases; mercury has been frequently given, but invariably with only temporary benefit, and the pains have been observed to return, even when the system was under its influence.

In the second class of cases, where the system is tainted with syphilis, along with the preceding treatment, mercury has very often been found extremely efficacious, given in the form of Plummer's pill or the blue pill, as an alterative. Relapses are very common in this form of the complaint, and the patient becomes weakened and emaciated from constant suffering, the digestive organs sympathise with the disease of the general system, and dyspepsia in some of its various shapes is invariably present.

Iodine, in the form of the Hydriodate of potash, has of late years been found extremely useful in the various forms of rheumatism especially the syphilitic. It has been employed very generally for several years past, but as yet it has not had a fair trial, the supply being limited; the testimony of H. M.'s medical officers however, is invariably favourable to it, as a powerful alterative and tonic.

For several years past rheumatism has increased in frequency, in a remarkable degree, thus in 1836, 37, and 38, not less than 2,980 cases were admitted into H. M.'s hospitals, and of this number 217 men were invalided, or fully 7 per cent; while during 1829, 30 and 31, only 1,159 cases were admitted, and 38 invalided, or a little more than 3 per cent., on the number treated; the cause of this increase and of the more inveterate nature of the disease, it would perhaps be difficult to explain, but such is the fact.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

The general table No. 22, of European military sick, for ten years, for H. M.'s troops at Poonamallee, and Arnee, and the H. C. Artillery at St. Thomas's Mount, and the Drum boy establishment at Wallajahbad, shows the total amount of sickness and mortality from the most important diseases, each half year, during that period, along with the annual per-centage of sick to strength, of deaths to sick treated, and of deaths to strength; the average of these respectively being, as shewn in the abstract table No. 23,—155·773,—3·768 and 5·870; and except in 1832, and 1833, this average holds pretty fair, in these two years the ratio of mortality to sick treated, and to the numerical strength, was more than doubled, which it will at once be observed, was occasioned almost solely by cholera, this disease having prevailed epidemically, in both these years, in H. M.'s 45th, 46th and 62nd regiments, while marching in the division, particularly in north Arcot. In 1834 the admissions were increased above the average, but not from sickness of importance.

In the table No. 22, the columns for cutaneous disease, and delirium tremens are blank, till 1834, owing to these diseases not being specified in the returns previous to that year, it is believed however, that the result of the five remaining years, gives a fair average of the proportion of these complaints.

In the general abstract table No. 23, it will be observed, that the total admissions have been 19,319, and the total deaths 728, from an aggregate strength of 12,402. The most prevalent diseases have been *fevers, dysentery, syphilis, rheumatism, hepatitis, diarrhœa* and *thoracic diseases;* and the most fatal have been *cholera, dysentery, thoracic diseases, hepatitis, fever* and *diarrhœa*—the per-centage of admissions and deaths from each of which, is noted in the table.

It will also be seen, that the admissions are somewhat more numerous in the second half yearly period, chiefly from bowel complaints and fever; and that the increase of deaths during this period, has been occasioned principally by cholera.

Similar tables Nos. 24 and 25, for the native troops, are appended, they comprise the sick of the military at St. Thomas's Mount, Palaveram, Wallajahbad, Arcot and Vellore; the total number treated has been 31,825, and 993 deaths have occurred in an aggregate strength of 64,484:—the average per-centage of sick to strength, has been 49·353, of deaths to sick treated 3·120, and of deaths to strength 1·539. The most numerous admissions have been from *fevers, rheumatism, cutaneous diseases, ophthalmy,* and *syphilis;* and the mortality has resulted principally from *cholera, fevers, bowel complaints, thoracic diseases* and *rheumatism.*

The average has been pretty uniform throughout the decennial period, except in the years 1833, 37, and 38—when the mortality was considerably increased, and almost solely it will be seen by cholera. In 1833 this disease was epidemic amongst the native troops, at Arcot and Vellore, at the same time that it prevailed in H. M.'s 62nd regiment when marching through the division as already noticed. It is of importance to remark that during the preceding year, the native regiments at these, and other stations in the centre division, were almost free from cholera, although H. M.'s 45th regiment suffered severely from it while marching from Arnee to Masulipatam, in the months of September and October, of that year; no less than 177 cases with 97 deaths, occurred in the 45th regiment during these two months, while only 12 cases, with two deaths, happened amongst the entire native force of the division, in the same period. Again in 1837, and 1838, cholera attacked three native corps while marching in this division, namely the 8th, 24th and 27th regiments; the 8th when passing through the Nellore Collectorate in 1837, the 24th nearly on the same ground in 1838, and the 27th in the Chittoor

district in the beginning of the same year. On reference to the Table No. 22, (for Europeans) but few cases of cholera will be seen to have happened in 1837, and those in 1838 took place in H. M.'s 63d regiment in the month of January, when temporarily stationed at Arnee.

It may be mentioned here, in connexion with this subject, that the 8th and 24th regiments N. I., when suffering from cholera in the years 1837 and 1838, were encamped on the Red Hills, an elevated, open and dry piece of ground, about seven miles N. W. of Fort St. George, before they were allowed to march into the cantonment of Palaveram, where they were to be stationed. The ground in the neighbourhood of the hills, is of a lateritious nature, and appears in every way well adapted for the encampment of troops, affected either with epidemic or contagious disease; they also offer an eligible retreat for convalescents from the Presidency, and are frequently resorted to for this purpose, several bungalows having been erected on the borders of a large lake close thereto.

The tabular statements No. 28 and 29, have been framed from the abstract returns No. 23 and 25; and will be found to exhibit much useful and interesting information, relative to the more important diseases.

The tables No. 26 and 27, for European and native sick respectively, have been drawn up similarly to those given in the report for the Presidency division; they exhibit the admissions and deaths from specific diseases, in each of the classes therein mentioned, during a period of five years, from 1834 to 38 inclusive; the total sick from each class is also shewn with the mortality, and the percentage of admissions to strength, and of deaths to sick treated.

Amongst the European troops, (table No. 26) the most numerous admissions have been from the classes of *abdominal complaints*, including *dysentery and hepatitis*, (which from their importance, have been exhibited separately in the

tables), *venereal diseases, rheumatic affections, wounds and accidents, diseases of the brain,* and *of the lungs;* and the most fatal have been *abdominal complaints, diseases of the lungs, and of the brain, fevers, cholera, rheumatic affections and dropsies.*

The per centage of sick to strength, during these five years, has been 149·419, of deaths to sick treated 2·866, and of deaths to strength 4·282.

In the corresponding table for the native troops No. 27, the greatest number of admissions it will be observed have been from the classes of *fevers, rheumatic affections, wounds and injuries, abdominal complaints,* including *dysentery and hepatitis, diseases of the skin* and *venereal complaints;* and the greatest mortality has been occasioned by *cholera, fevers, diseases of the abdominal viscera,* and *of the lungs, specific diseases, rheumatic affections, and diseases of the brain.*

The ratio per cent. of admissions to strength, during these five years, has been 51·494, of deaths to admissions 2·957, and of deaths to strength 1·811.

From the two comprehensive returns No. 26 and 27, the tabular statements No. 30 and 31 have been framed, which exhibit in a small compass much valuable information, relative to the diseases of European and native troops.

VACCINATION ESTABLISHMENT.

A short account of the vaccination establishment under the Madras Presidency.

Vaccination was first introduced into India under the auspices of the Right Honorable Lord Clive, in the year 1802, and has been fully established at this Presidency for a period of 41 years. Considerable changes, and improvements have taken place in the department from time to time; the principal of which has been substituting a fixed rate of monthly pay, for the native vaccinators, in place of head money at first allowed according to the numbers vaccinated; the following extracts from the regulations on this subject, furnish a detailed statement of the system under which the department is at present conducted; the measures in force to extend the blessings of vaccination to the population generally; and to insure the efficient performance of the duties of the native practitioners.

"The department of vaccination is conducted by the superintending surgeons of divisions, subject to the immediate authority, and control, of the medical board."

"The medical officers specially nominated by government as local superintendents of vaccination, at the stations of circuit and zillah courts, and other fixed situations, together with the establishments of native vaccinators, are under the immediate authority of the superintending surgeons of divisions, in all matters relating to vaccination. The local superintendents correspond with them, and submit to them their monthly reports for the information of the medical board."

"It is the duty of the local superintendents to practice vaccination themselves, and to promote its diffusion amongst the native population by every means in their power. They superintend the operations of the native vaccinators, and are required to encourage and stimulate,

" them to exertion; to afford them the utmost possible faci-
" lity; while they are not to neglect to keep a strict and vi-
" gilant watch over them, nor to omit any practicable means
" of checking and verifying their monthly registers, and
" reports. For these purposes, as, well as by examining the
" nature and character of the disease kept up, to judge whe-
" ther the *Virus* be genuine or not, occasional personal in-
" spection is absolutely necessary. It is, therefore, to be
" considered as an essential principle of the duty of super-
" intendence, that the local superintendents, shall, from
" time to time personally inspect the operations of the vac-
" cinators, in whatever parts of their respective districts they
" may be employed; and it is competent for the superin-
" tending surgeon, under the authority of the medical
" board, to direct the performance of this duty, when not
" interfering with any other of a more urgent description."

" It being desirable, in many respects, and especially in
" the ultimate view of devolving on the natives themselves
" the preservation of the vaccine disease, and trusting its
" general use and diffusion to their unaided exertions, that
" the practice should fall into the hands of the native prac-
" titioners, such only are to be selected to fill the places of
" vaccinators. An exception, however, may be made to
" this rule in favour of the sons, or immediate relations, of
" old vaccinators now in employ, and of approved zeal and
" ability. The vaccinators are to be selected with strict re-
" ference to the caste and description of natives amongst
" whom they are to be placed, and, whenever practicable,
" should belong to that country."

" Vaccinators are appointed, or removed, under the au-
" thority of the superintending surgeon with the sanction
" of the medical board; and no local superintendent is to
" remove or appoint any vaccinator of his own authority,
" nor, on any pretence, to employ them as dressers, or me-
" dical servants. When a vaccinator is accused of miscon-
" duct in his public capacity, or of any offence, in his private
" character, affecting his eligibility to hold a public office,
" he should be brought by the local superintendent before

"the magistrate, or zillah judge, as the case may be, in all "instances, where the offence alleged, comes fairly under the "cognizance of legal authority. The decree or sentence "thereupon will be communicated to the local superinten- "dent, for the information of the superintending surgeon, "and the medical board. But when imputations or objec- "tions involve considerations merely of a professional nature, "the circumstances are to be submitted to the superintend- "ing surgeon."

"As an encouragement to the poorer classes of natives to "come forward with their children to be vaccinated at pub- "lic depôts, and thereby to secure an unfailing supply of "genuine vaccine virus, by an uninterrupted succession of "inoculations under the immediate observation of the super- "intendents, government has sanctioned the gratuitous is- "sue of rice to such subjects, at the Presidency, Masulipa- "tam, Trichinopoly and Tellicherry. Rice for this purpose "is furnished by the Commissariat."

"As the general and successful practice of vaccine inocu- "lation is an object of great public interest; and as the col- "lectors of revenue are peculiarly enabled, by their local "knowledge, their authority, and their public servants, to "encourage this practice, and to detect fraud or neglect of "duty on the part of the native vaccinators; these authori- "ties are required to promote, by every means in their pow- "er, the propagation of this valuable discovery."

"The local superintendent will accordingly furnish the "collector of the district with a nominal list of his esta- "blishment of vaccinators, stating in what talooks and vil- "lage each is employed; and he will also notify to the col- "lector such changes in these respects as may, from time to "time, take place. It will then be the duty of the collector, "by means of his public servants, to observe the conduct of "these people, and to explain to the inhabitants, as occasion "offers, the nature of their occupation. He will cause the

" tahsildars and village curnums to make themselves ac-
" quainted with the proceedings of the vaccinators, and to
" countersign the monthly registers of inoculations kept by
" them, in proof of their veracity."

" These registers, thus countersigned and certified, being
" received by the local superintendent, he will prepare from
" them an abstract return for transmission to the superin-
" tending surgeon, copy of which he will likewise furnish to
" the collector. The original registers and reports of the
" vaccinators are then to be placed amongst the public re-
" cords of the collector's cutcherry, in order that reference
" may be had to them at any future time, should occasion
" require; and collectors of revenue are hereby according-
" ly required to receive and preserve them."

The following is a list of the Vaccination Establisment.

STATIONS.	Local superintendents.	Number of vaccinators.
Madras	3	13
Poonamallee	1	4
Chingleput	1	6
Cuddalore	1	4
Verdachellum		4
Vellore	1	4
Chittoor	1	8
Nellore and Ongole	1	6
Guntoor	1	4
Ganjam	1	3
Vizagapatam	1	5
Ingeram and Madepollam	1	4
Rajahmundry		4
Masulipatam	1	4
Negapatam	1	4
Combaconum	1	4
Tanjore	1	4
Trichinopoly	1	4
Salem	1	4
Coimbatore	1	4
Dindigul	1	4
Madura		4
Ramnad		1
Tinnevelly	1	4
Cochin	1	4
Travancore	1	4
Onore	1	4
Mangalore		4
Cannanore	1	4
Tellicherry	1	7
Calicut	1	4
Augadiporam		3
Bangalore	1	4
Mysore Province	1	1
Cuddapah	1	4
Bellary	1	4
Kurnool	1	2
Total. .	33	162

With the view of preventing native vaccinators from falling into careless, or negligent habits, which they are apt to do when away for any length of time from the immediate control of the European officers, they are occasionally removed from one part of their district to another, so that each individual may come under the *surveillance* of the local superintendent in turn: and they are likewise strictly prohibited under pain of dismissal from the service, from engaging in trade or agriculture. In cases of misconduct, or neglect of duty, the vaccinators are either subjected to dismissal from the service, or stoppage of pay, the latter punishment is however but seldom resorted to.

Superintending and executive medical officers having been called on by the medical board, in 1838, to increased exertion in extending the benefits of vaccination, a progressive increase in the numbers annually vaccinated has since taken place; and in the year 1839, instructions were issued by the board directing that the entire of the medical subordinates, whether in the civil or military departments, should in future be obliged to qualify themselves in a knowledge of the disease, with a view to its more extensive dissemination; and in addition to the labours of the regular vaccination establishment, the prophylactic is now regularly kept up in the army, and amongst its numerous followers; every soldier or sepoy not having unequivocal marks of having had either small pox or cow pox, being vaccinated when first entertained; and their families are encouraged, to bring forward their children to be vaccinated. The system in operation throughout this presidency, may therefore be confidently stated to be in every respect efficient, and to be conducted with vigour.

As regards the estimation in which vaccination is held by the population of the Madras territories, it may be stated, that as the operation of inoculating with the matter of small pox has been practised throughout various parts of the presidency by native doctors, from time immemorial; and as the modern operation with the cow pox virus, is so perfectly

similar to that, to which they have been always accustomed, the natives in general see no distinction between the two diseases, and consequently have no prejudice against vaccination. In some of the regiments of native cavalry and in the horse artillery, consisting chiefly of mahomedans, the sepoys are more unwilling, perhaps from their habits of privacy, to bring their families forward for the purposes of vaccination, than other classes of the people; with this exception, the only other difficulty to be contended against in this part of India, is the general apathy of the natives regarding matters of the kind, except when under the influence of fear, on the breaking out of epidemic small pox and there is every reason to be satisfied with the result of the system of vaccination under this presidency, where it has proved a blessing to hundreds of thousands of the inhabitants.

A general table is here given, shewing the progress of vaccination from May 1807, to the end of the year 1840, with the expense of the establishment.

Statement shewing the progress of Vaccination under the Government of Fort St. George, with the number of persons vaccinated and the amount of expense incurred, from May 1807 to April 1810.

Years.	The Presidency, and Centre Division.					Out Stations.			Grand Total.					
	Number of persons vaccinated.	Expense of vaccine Establishment.	Contingent charge of vaccine establishment.	Total expense of vaccine establishment.	Rate of expense for vaccinating every 100 persons.	Number of persons vaccinated.	Total expense of vaccine establishment.	Rate of expense for vaccinating every 100 persons.	Number of persons vaccinated.	Total expense of vaccine establishment.	Total contingent charge of vaccine establishment.	Total expense of vaccine establishment.	Rate of expense for vaccinating 100 persons.	
		Rupees.	Rupees.	Rupees.	Rs. A. P.		Rupees.	Rs. A. P.		Rupees.	Rupees.	Rupees.	Rs.	A. P.
1807	41,671	20,333	1,474	25,707	85 11 0	2,24,597	41,664	18 9 9	2,66,268	62,597	14,774	77,371	29	0 11
1808	31,655	20,933	707	21,601	68 5 9	1,82,476	45,108	24 11 6	2,14,131	66,011	707	66,748	31	2 8
1809	24,935	20,933	1,113	22,046	88 6 7	1,39,183	41,916	30 1 10	1,64,118	62,849	1,113	63,962	38	15 6
1810	25,555	24,110	2,948	27,058	106 0 7	1,29,317	45,854	35 7 5	1,54,872	70,014	2,948	72,962	47	1 9

Statement exhibiting the number of persons vaccinated and the amount of expense incurred, from May 1811 to April 1829.

Years.	Presidency.					Out Stations including Centre Division.					Grand Total.					
	Number of persons vaccinated.	Vaccine establishment.	Contingent charges.	Total.	Rate of expense for vaccinating 100 persons.	Numbers of persons vaccinated.	Vaccine establishment.	Contingent charges.	Total charge.	Rate of expense for vaccinating 100 persons.	Total number of persons vaccinated.	Expense of vaccine establishment.	Contingentcharges.	Total expense.	Rate of expense for vaccinating 100 persons.	
		Rupees.	Rs.	A P.	Rs.	A P.		Rupees.	Rs.	A P.	Rs.	A P.		Rupees.	Rs.	A P.
1811	18,314	8,291	7,038	0 0	15,329	0 0	1,29,145	5,088	0	0 0	53,068	0 0	41	1 8	1,47,460	61,379	7,038	0 0	68,417	0 0	46	6 2
1812	23,961	8,232	17,265	0 0	25,497	0 0	1,30,908	54,306	0	0 0	54,306	0 0	41	7 8	1,54,872	62,538	17,265	0 0	79,803	0 0	51	9 5
1813	28,424	11,193	7,055	0 0	18,278	0 0	64	4 10	1,49,596	54,264	643	0 0	54,907	0 0	36	10 0	1,78,320	65,457	7,728	0 0	73,185	0 0	41	0 5
1814	28,219	11,193	8,291	0 0	19,484	0 0	68	15 6	1,39,638	54,726	605	0 0	55,331	0 0	34	10 6	1,67,857	65,919	8,896	0 0	74,815	0 0	39	13 1
1815	27,942	11,193	7,371	0 0	18,564	0 0	66	7 0	1,42,950	55,482	170	0 0	55,652	0 0	38	14 9	1,70,922	66,675	7,541	0 0	74,216	0 0	43	6 8
1816	23,853	11,193	4,798	0 0	15,991	0 0	67	7 10	1,30,253	51,978	366	0 0	55,344	0 0	42	7 10	1,54,106	66,171	5,164	0 0	71,335	0 0	46	4 7
1817	22,797	11,193	4,936	0 0	16,129	0 0	70	12 0	1,35,634	55,356	294	0 0	55,650	0 0	41	0 5	1,58,431	66,549	5,230	0 0	71,779	0 0	45	4 10
1818	23,906	11,193	4,464	0 0	15,657	0 0	65	7 10	1,23,824	54,305	286	0 0	54,592	0 0	44	1 4	1,47,730	65,499	4,750	0 0	70,249	0 0	47	8 10
1819	22,525	10,983	4,851	0 0	15,388	0 0	70	4 8	1,14,541	53,552	264	0 0	53,856	0 0	47	0 3	1,37,068	64,535	5,115	0 0	69,690	0 0	50	12 5
1820	20,198	11,67	4,073	0 0	15,746	0 0	77	15 4	1,05,347	54,306	177	0 0	54,483	0 0	50	4 8	1,25,525	65,979	4,250	0 0	70,229	0 0	54	10 3
1821	13,253	11,883	2,923	0 0	14,805	0 0	111	11 4	1,03,057	53,452	230	0 0	53,682	0 0	52	0 4	1,16,310	65,264	3,153	0 0	68,417	0 0	58	13 4
1822	12,563	11,672	2,731	5 9	14,403	5 9	114	10 4	93,578	52,752	0	0 0	52,752	0 0	56	5 11	1,06,141	64,424	2,731	5 9	67,155	5 9	63	4 3
1823	12,204	11,757	2,561	0 0	14,321	0 0	117	5 6	90,471	54,055	548	0 0	54,603	0 0	60	5 7	1,02,675	65,812	3,112	0 0	68,924	0 0	67	2 0
1824	22,668	12,177	3,022	0 0	15,199	0 0	67	0 9	1,17,435	53,508	439	0 0	53,947	0 0	45	15 0	1,40,103	65,685	3,461	0 0	69,146	0 0	49	5 7
1825	11,306	12,177	6,468	0 0	18,645	0 0	138	0 2	1,08,560	54,552	358	0 0	55,210	0 0	50	11 5	1,22,866	67,029	6,826	0 0	73,855	0 0	60	5 8
1826	12,500	12,177	3,385	0 0	15,562	0 0	124	7 11	1,06,219	54,852	341	0 0	55,233	0 0	51	15 11	1,18,719	67,029	3,766	0 0	70,795	0 0	59	10 1
1827	19,562	11,964	3,467	0 0	15,431	0 0	122	3 5	1,07,014	54,852	291	0 0	55,143	0 0	51	8 5	1,19,576	66,816	3,758	0 0	70,574	0 0	59	0 1
1828	12,527	11,673	2,360	0 0	14,033	0 0	112	0 4	1,11,676	54,852	248	4 7	55,100	4 7	49	5 5	1,24,203	66,525	2,608	4 7	69,133	4 7	55	10 6
1829	7,266	5,670	1,194	0 0	6,864	0 0	94	7 6	1,04,816	55,608	308	12 2	55,916	12 2	53	5 0	1,12,162	61,278	1,502	12 2	62,780	12 2	56	15 8

Table exhibiting the number of persons vaccinated from the years 1830 to 1840 inclusive.

Years.	Christians.		Hindoos.		Mahomedans		Total.			In the Presidency Division.	Other Districts.	Total expense of vaccine establishment.		
	Males.	Females.	Male.	Female.	Males.	Females.			Grand Total.					
												Rs.	A.	P.
1830	4,427	3,671	61,133	48,313	6,035	3,645	71,595	55,635	1,27,230	7,663	1,19,567	69,267	3	0
* 1831	4,582	3,428	47,919	39,327	5,511	3,364	58,012	46,519	1,04,531	5,761	99,770	60,147	8	0
1832	4,405	3,631	45,872	37,031	5,168	3,281	55,445	43,943	99,393	6,477	92,416	64,372	7	0
1833	4,456	3,813	52,788	44,221	5,083	3,384	62,327	51,422	1,13,749	20,255	93,494	79,712	9	0
* 1834	3,848	3,334	43,990	36,342	5,104	3,382	52,942	43,058	96,000	9,506	86,094	67,157	14	0
1835	3,273	2,731	41,083	33,955	5,039	3,182	49,395	39,873	89,268	8,853	80,415	57,537	4	0
1836	3,501	2,961	41,343	34,232	4,873	3,755	49,717	39,945	89,662	9,571	81,331	57,513	11	0
1837	3,377	2,976	40,951	35,141	4,650	2,593	48,978	38,710	87,688	8,428	79,254	38,840	7	0
1838	4,145	3,349	45,482	36,774	5,530	3,478	55,157	43,552	98,749	8,855	89,894	40,598	12	0
1839	4,893	3,462	58,266	46,331	6,749	3,973	69,308	53,756	123,074	9,341	1,13,733	39,020	4	0
1840	4,108	4,425	62,675	50,921	6,133	3,856	73,216	58,674	131,890	9,459	1,22,431	39,501	8	0

* The pay of the native vaccinators was reduced in this year from 5 to 4 pagodas *per mensem*, in the 1st class, and from 4 to 3 pagodas in the 2d class. Resolution of Government 25th October 1831.

* In this year the monthly allowance of 32 Rs. 8 Annas granted to Local Superintendents of Vaccination was discontinued, and 20 Rupees *per mensem* given in lieu thereof, was declared to be included in the consolidated fixed salaries of Civil Surgeons. G. O. G. August 1835.

A table is here given shewing the number vaccinated in each of the districts, in the centre division, from 1829 to 1838 inclusive. Also the number of vaccinators in each district.

CENTRE DIVISION.

Table shewing the Number of Persons successfully vaccinated, from 1829 to 1838 inclusive.

DISTRICT OR STATIONS.	Population, in 1837.		Class and sex of Patients.						Total vaccinated.	
			Christians.		Hindoos.		Mahomedans.			
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Nellore including Ongole....	1,64,783	1,51,565	107	78	22,201	18,900	1261	889	23,569	19,867
Guntoor including Palnaud.	1,35,562	1,19,320	56	62	15,361	14,807	1099	971	17,016	15,840
North Arcot.....	2,65,218	2,54,774	3079	2008	19,181	13,947	5320	3331	27,580	19,286
South Arcot.....	2,53,161	2,32,250	1540	1387	13,969	11,830	761	629	16,263	13,846
Chingleput.....	1,74,471	1,61,924	1672	1377	17,878	14,283	722	525	20,272	16,785
Grand Total.....	9,93,213	9,19,833	6454	4912	89,083	74,367	9163	6345	1,04,700	85,624

Number of Vaccinators in each District.

	1st Class Vaccinators.	2d Class Vaccinators.
Nellore and Ongole.....	1	6
Guntoor and Palnaud.....	1	3
North Arcot.....	3	9
South Arcot.....	2	6
Chingleput.....	7	3
Total.....	14	26

The number vaccinated in this Division during these ten years is 190324; the whole expense incurred amounts to Rupees 87,780, which gives an average of somewhat more than 46 Rupees per hundred, or eleven pence per head in English money.

CENTRE DIVISION.

Statement shewing the extent of accommodation in the Jails in the Centre Division, the Diet of the Prisoners, Clothing, Employment and Hours of labour.

STATION.	NELLORE.	GUNTOOR.	CHITTOOR.	CUDDALORE.	CHINGLEPUT.
Number of Prisoners the prison is capable of containing, in separate sleeping cells.	No separate sleeping cells.	No separate sleeping cells.	The prison is divided into large apartments, capable of containing 700 to 800 prisoners; has 2 cells, one for the highest crimes, the other for separate retention.	26	14 separate apartments, capable of holding 300 prisoners.
Number of Prisoners the prison is capable of containing, where more than one prisoner sleeps in one cell.	23 cells, capable of containing 750 Prisoners.	Capable of containing about 500 prisoners.	Is answered in the preceding column.	580	300 prisoners, no separate sleeping cells.
Dietary or other weekly allowance, and weekly cost per head.	1 seer of rice with condiments—2 cash for vegetables. As. P. Cost..... 5 5	6 Seers of Cholum, and 1 seer of rice—2 As. 4 Pice in condiments, &c. As. P. Cost.... 4 73	Male convicts 80 Rs. weight rice daily. Female do. 70 do. do. As. P. Cost per head.. 5 3	Rs. A. P. 0 11 11 including cost of guards, Peons, &c.	Half measure of rice, with sufficient condiments for curry. A. P. Cost.... 4 5
Allowance of clothing and bedding, and cost per head.	2 cloths and 1 cumbly annual. Rs. A. P. Cost.... 1 12 0	1 Cumbly 1 Mat, 6 yds. of cloth annually. Rs. A. P. Cost.... 1 6 7	2 Cloths and 1 cumbly annually, no bedding. mats discontinued. Rs. A. P. Cost.... 1 7 0	2 Cloths and 1 cumbly annually. Rs. A. P. Cost.... 1 12 0	2 Cloths and 1 cumbly annually, no bedding. Rs. A. P. Cost.... 1 8 0
Description of employment and hard labour.	Erecting public buildings, making iron, &c. tradesmen work at their trades.	Working on the roads =repairing and digging new wells.	Working on the roads —tradesmen work at their trade.	Working on the roads —tradesmen work at their trades.	Repairing roads, weaving, and paper making.
Hours of labour.	From 8 to 12 A. M. " 1 to 5 P. M.	From 8 A. M. till 4— 30 P. M. in the months of May, June and July till 3—30 P. M.	From 6 to 12 A. M. " 2 to 5 P. M.	From 7 A. M. till 4 P. M.	From 7 A. M. till 4 P. M.

Statistical Table for Nellore and Ongole for the year 1837.

No.	TALOOKS.	Population.			Total number of villages, &c.		Houses.	Ploughs.	Cattle.					Government dry Land.			Enam dry Land.		
		Women.	Men.	Total.	Villages.	Hamlets.			Cows.	Bullocks.	Female Buffaloes.	Male Buffaloes.	Sheep and Goats.	Cultivated Land.	Waste Land.	Extent of land capable of being cultivated.	Cultivated Land.	Waste Land.	Extent of land capable of being cultivated.
														Coorectoos.	Coorectoos.	Coorectoos.	Coorectoos.	Coorectoos.	Coorectoos.
1	Survapully	10,776	11,430	22,206	42	42	4,315	1,603	18,611	3,095	3,455	2,552	17,390	* 2,887	1,974	4,862	488	529	1,017
2	Cottah	5,572	5,991	11,563	30	57	2,477	973	6,705	2,869	1,530	674	6,152	465	931	1,397	135	185	320
3	Nellore	24,384	25,125	49,509	54	18	9,975	2,808	21,710	8,369	5,209	2,960	11,800	1,594	1,366	2,920	447	1,046	1,494
4	Talamunchy	12,448	14,252	26,700	45	24	4,833	2,922	14,142	5,135	3,611	2,856	10,465	430	2,898	3,328	68	101	170
5	Sungum	11,315	12,605	23,920	35	14	4,778	1,633	10,146	4,259	4,304	3,119	21,678	3,913	206	4,119	701	565	1,267
6	Cauvaly	6,228	6,553	12,781	26	40	3,355	961	9,468	1,666	2,411	1,428	19,514	1,515	2,825	4,341	442	1,767	2,210
7	Toomunaltapoor	4,609	4,864	9,473	19	27	1,991	1,080	7,187	3,747	3,376	132	34,185	4,208	5,820	8,024	1,110	710	1,821
8	Goondavole	2,846	3,236	6,082	24	7	1,246	537	4,530	1,599	2,246	176	16,952	1,433	5,892	7,326	419	319	73
9	Ravoor Varcegooutapaud	15,736	15,071	30,807	62	37	5,821	2,480	7,998	5,917	6,805	1,600	47,236	6,871	6,643	13,515	1,542	1,072	2,615
10	Calegherry Doottaloor	8,308	9,340	17,648	39	45	2,978	1,450	5,957	3,788	3,362	302	34,993	4,581	2,300	6,881	2,370	1,688	4,058
11	Buddapoody	8,134	8,616	16,750	40	26	4,588	1,656	6,054	3,270	2,349	1,372	19,120	3,208	3,993	7,191	1,433	2,024	3,458
12	Dauvagoodoor Patchoovah	9,537	10,520	20,057	76	63	3,534	2,756	6,216	6,292	5,032	500	39,397	11,452	10,208	21,660	4,185	2,900	7,086
13	Ongole	14,164	17,502	31,666	37	41	6,676	2,506	9,714	5,784	6,713	1,138	28,445	8,677	5,673	14,351	5,332	3,697	9,029
14	Enamanamellore	7,459	8,404	15,863	39	31	2,631	1,925	5,815	4,107	3,554	667	11,830	6,762	5,509	12,272	4,101	3,455	7,857
15	Chendalore	10,049	11,274	21,323	48	29	5,763	1,399	5,630	3,003	5,134	340	23,433	8,715	11,117	17,833	2,975	3,593	6,568
	The above information has not with exception of the number of villages for some places been obtained for the following Talooks.																		
16	Shrotriums				245														
17	Vencatagherry Zemindary				971														
18	Sydapoor do.				115														
19	Woodiagherry Jaghire				68														
20	Choondy Zemindary				44														
21	Meetlealpaud Zemindary				3														
22	Woortavar Polliam				4														
23	Chittalevar Polliam				3														
24	Toonavar do.				4														
25	Tandiboyanavar do.				8														
26	Nuzzers and Reessooms				0														
27	Stalla curnums do.				0														
28	Quit Rent				0														

* 1,35,000 square feet of land.

Statistical Table for Guntoor and Paulnaud for the year 1837.

	Number.	TALOOKS.	Population.			Houses.	Cattle.					Total number of Ploughs.	Total assessed lands under rent.	Total assessed lands & on those under management.
			Men.	Women.	Total of Inhabitants.		Cows.	Bullocks.	Female Buffaloes.	Male Buffaloes.	Sheep and Goats.		Quantity of Land.	Quantity of Land.
													Acres.	Acres.
Zumanie Estates.	1	Tungadah Purganah	5,369	5,387	10,756	3,897	2,846	3,112	1,420	569	17,354	1,403	16,995	17,746
	2	Carempoody do.	2,965	2,839	5,804	2,291	1,120	1,811	1,072	261	5,649	882	9,051	9,420
	3	Timmercottah do.	1,546	1,517	3,063	1,381	1,005	978	568	97	6,768	479	4,863	5,025
	4	Goorjalah do.	5,157	5,013	10,160	3,975	2,259	3,182	1,618	441	14,278	1,745	16,744	18,855
	5	Maulherlah do.	7,683	7,454	15,137	10,231	4,123	4,338	2,398	508	20,580	3,038	27,344	28,284
Zemindary Estates.	1	Raypully District	8,548	7,307	15,855	4,325	2,711	4,606	2,193	659	10,446	2,571	0	0
	2	Chilcaloorpaud do	11,473	9,754	21,227	7,580	4,354	5,454	3,206	1,388	20,609	2,965	0	0
	3	Suttanaputty do	11,140	9,775	20,915	7,124	4,667	5,070	2,975	1,172	21,148	2,435	0	0
	4	Innaeondah and Bellumeondah Purganahs.	19,582	18,170	37,752	14,366	12,927	9,630	7,074	1,606	81,369	3,632	0	0
	5	Gurkepaud, &c. villages	60	60	120	33	33	22	26	3	879	10	0	0
	6	Chintapully District	34,623	28,574	63,257	21,009	13,331	14,526	8,479	2,026	72,057	6,733	0	0
	7	Canamalachervoo	22	17	39	9	0	4	4	2	292	2	0	0
Estates purchased by the proprietors in public Auction.	1	Ranchoor District	9,248	7,781	17,029	5,287	4,535	4,880	3,077	918	12,234	2,791	0	0
	2	Colloor villages	1,621	1,289	2,910	984	370	835	319	57	674	442	0	0
	3	Nezampatam Sirkar	13,168	11,475	24,643	7,682	5,609	2,193	2,741	2,361	31,933	2,008	0	0
	4	Vunghepoorum Moottah	3,186	2,757	5,943	2,211	1,525	2,054	948	289	3,461	1,058	0	0
	5	Bundaroopully	146	146	292	34	29	51	24	9	106	30	0	0
Jaghire.	1	Inavole of Jaghire village	5	5	10	2	2	12	0	0	0	6	0	0

Statistical Table for the Northern Division of Arcot for the year 1837.

No.	NAMES OF THE TALOOKS.	Population.								Cattle, &c.					Cultivation,	
		Men.	Women.	Total.	Villages.	Hamlets.	Houses.	Ryots.	Ploughs.	Cows.	Bullocks.	Buffaloes.	Black Cattle.	Sheep.	Stullis. Cawnies.	Cawnies.
	Stamp Revenue in the Revenue Judicial Department.															
1	Chittoor	21,969	19,951	41,920	86	328	7,925	9,474	5,966	16,685	11,810	1,052	780	20,491	14,780	15,632
2	Tirputty	10,132	10,020	20,152	18	34	6,650	3,091	1,913	2,675	3,920	1,316	972	5,723	1,347	1,700
3	Cauverypauk	24,955	23,864	48,819	139	34	9,278	7,963	4,601	5,952	8,527	2,529	2,592	9,964	7,229	7,670
4	Sholinghur	14,647	13,728	28,375	102	87	4,966	4,959	4,168	6,752	7,501	1,804	1,814	17,312	10,248	12,693
5	Trivullum	16,867	15,758	32,625	119	172	6,349	5,636	4,639	8,205	7,659	2,342	1,729	19,430	12,338	13,348
6	Satghur	22,220	20,578	42,798	190	129	8,608	6,600	4,928	13,252	8,882	3,209	3,226	1,567	10,503	12,803
7	Cuddapanuttum	10,980	20,187	21,167	293	70	5,148	3,810	2,745	12,887	7,734	1,076	271	16,237	5,528	17,703
8	Arcot	26,462	27,012	53,474	131	41	10,042	5,544	3,672	5,921	7,841	2,824	2,827	15,391	13,184	0,540
9	Vellore	36,311	35,754	72,065	160	117	14,882	10,314	4,948	12,512	9,536	5,606	2,724	22,254	18,096	4,125
10	Trivuttoor	20,934	20,102	41,036	265	4	8,382	6,141	4,888	7,300	7,165	3,051	3,200	18,267	12,957	29,357
11	Poloor	15,707	16,564	32,271	188	63	6,061	5,621	3,212	8,321	4,629	2,633	1,843	14,228	11,622	10,941
12	Wundirwash	15,417	14,808	30,225	219	5	5,309	4,153	3,472	6,702	5,416	3,224	2,347	18,811	11,963	11,258
13	Suttwaid	12,052	11,030	23,082	104	86	4,089	4,051	2,834	7,494	7,170	1,470	1,421	16,461	4,499	4,669
14	Penmurry	11,927	11,097	23,024	255	74	4,762	5,203	3,071	8,750	6,766	1,132	451	9,129	4,263	4,128
	Poishcush.	*	*	*			*	*	*	*	*	*	*	*	*	*
15	Calastry Zemindaree				644	210										
16	Cavattee Nuggur do.				498	155										
17	Aveleondah Jaghire				18	18										
18	Arnee do				166	9										
19	Goodepaute Polliam				42	3										
20	Nargentee do.				62	18										
21	Poolecherlah do.				38	71										
22	Kulloor do.				8	87										
23	Bunganree do.				94	86										
24	Toombah do.				4	32										
25	Coongoondy Polliam Thasildary				316	69										
26	Vencutgherry Cottah	4,633	4,321	8,954	158	29	2,989	2,017	1,306	4,772	3,468	177	188	5,663	2,114	3,715

* Information not given.

Statistical Table for the Southern Division of Arcot and Cuddalore for the year 1837.

No.	NAMES OF THE TALOOKS	Soils. Black. Land.		Sandy. Land.		Red. Land.		Total. Land.		Totacal or Garden land irrigated by Wells. Land.		Means of Irrigation by Tanks. In Repair.	Tanks. Out of Repair.	Channels. In Repair.	Channels. Out of Repair.	Annicuts or dams. In Repair.	Annicuts or dams. Out of Repair.	Wells. In Repair.	Wells. Out of Repair.	Houses.	Population. Men.	Women.	Total.
		Cawnies	As.	Cawnies	As.	Cawnies	As.	Cawnies	As.	Cawnies	As.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1	Tindevanum.....	6,011	1½	16,514	6½	2-6	3	22,541	5½	125	12½	268	72	5	6	3	6	619	461	7,530	19,010	17,625	36,635
2	Trevandy.....	275	½	17,623	7½	6,596	13½	24,495	5½	88	13½	91	16	102	35	2	0	496	34	8,728	24,712	23,350	47,2·2
3	Villapooram.....	1,738	15½	31,609	3 0	1,063	7½	34,106	10½	160	5½	234	76	71	38	15	7	687	146	12,788	87,202	63,285	70,·87
4	Bowanghery.....	7,259	13½	15,211	11½	1,050	11½	21,522	4½	52	5½	104	23	115	38	3	0	89	5	6,516	17,117	15,177	32,294
5	Manuarroody	579	5½	1,001	14½	5,119	0½	6,730	4½	65	4½	82	6	198	8	4	0	68	9	3,309	8,011	7,617	15,628
6	Chedumberam....	4,447	14½	3,514	7½	2,861	2½	10,823	3½	20	0½	65	23	61	21	0	0	65	21	4,837	11,583	10,568	22,235
7	Tervamallur.....	0	0	19,161	6½	580	11½	19,982	1½	79	0½	283	216	59	55	20	48	1,424	305	4,755	11,667	10,568	58,·00
8	Verdachellum.....	14,717	13½	21,322	5½	1,875	6½	37,915	8½	150	13½	175	80	50	20	11	10	924	321	11,122	30,950	27,450	55,695
9	Eolevana, soore..	1,059	6½	15,711	11½	90	5½	16,861	1½	95	0½	247	61	45	33	2	3	1,142	657	7,523	18,710	16,988	33,220
10	Tecullore.....	0	0	12,779	13½	23	15	12,802	12½	78	13½	276	117	30	9	10	6	1,118	769	6,525	17,076	16,144	33,220
11	Cullacoorchey...	2,419	10½	13,425	5½	15	11½	15,859	11½	154	6½	221	102	85	30	68	13	1,762	884	7,150	20,822	18,051	38,·73
12	Chatput.....	3	1½	15,972	5½	2	1½	15,975	4½	117	5½	421	242	10	19	9	9	2,348	1,592	7,184	19,337	18,593	37,930
	Total....	38,536	3	1,85,140	14½	19,536	6	2,43,222	7½	1,193	1½	2,473	1,044	837	306	141	102	10,782	5,173	98,573	2,36,227	2,14,668	4,50,·95
	Cuddalore.....	52	9½	2,071	4½	0	0	2,123	14½	2	15½	6	1	8	1	1	0	24	11	6,130	16,937	17,582	34,519
	Grand Total....	38,588	12½	1,87,224	3½	19,536	6	2,45,349	6	1,196	1	2,479	1,045	845	307	142	102	10,736	5,185	94,703	2,53,164	2,32,250	4,85,414

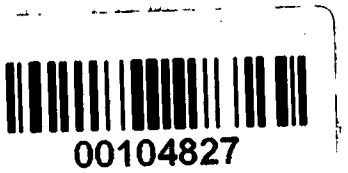
Statistical Table for the Southern Division of Arcot and Cuddalore, for the year 1837, Continued.

No.	NAMES OF THE TALOOKS.	Cattle.				Taxes on Sundry Trees.																									
		Bullocks.	Buffaloes.	Sheep.	Total.	Tamarind Trees.				Mango Trees.				* Illupala Trees.				Jack Trees.				Cocoanut Trees.				Palmyrah Trees.				Date Trees.				Total.			
		No.	No.	No.	No.	No.	C. Rs.	A.	P.	No.	C. Rs.	A.	P.	No.	C. Rs.	A.	P.	No.	C. R.	A.	P.	No.	C. R.	A.	P.	No.	C. R.	A.	P.	No.	C. R.	A.	P.	No.	C. Rs.	A.	P.
1	Tindevanum	26,175	10,115	20,649	56,939	3,271	737	6	6	1,293	141	6	10	1,781	194	12	8	95	5	11	8	2,594	235	11	2	1,186	99	5	0	0	0	0	0	10,251	1,455	5	2
2	Trevandy	16,365	5,017	11,493	32,875	653	188	3	3	1,010	119	2	3	1,997	233	5	0	648	127	8	10	2,626	287	3	0	1,940	80	15	0	510	29	11	1	8,694	1,072	7	5
3	Villapooram	33,699	10,669	29,082	69,841	2,890	564	0	0	2,013	220	2	3	2,435	266	5	5	13	2	13	6	2,197	240	5	11	2,374	194	11	4	589	45	12	0	12,701	1,581	8	10
4	Bowangherry	12,803	4,472	11,192	28,467	2,216	462	14	0	1,090	111	9	1	733	80	6	4	496	108	35	0	314	34	5	6	18,335	959	13	5	0	0	0	0	17,916	1,757	15	4
5	Manuargoody	6,393	3,000	1,440	12,763	701	153	11	10	130	14	2	6	648	70	14	11	11	2	6	6	807	88	4	3	0	0	0	0	0	0	0	0	2,297	329	9	0
6	Chedumbaram	9,698	3,088	3,636	16,422	1,496	271	2	0	490	54	2	3	2,151	235	2	4	1	0	2	6	1,045	114	4	9	1,179	57	1	7	0	0	0	0	6,562	822	0	5
7	Trevamallie	32,107	7,026	25,004	64,031	1,477	261	10	4	575	47	0	3	297	32	7	11	0	0	0	0	46	5	2	3	2,309	257	8	8	584	45	0	11	6,248	743	4	3
8	Verdachellum	22,510	6,589	69,739	98,760	2,327	481	12	6	1,396	152	11	9	1,717	197	12	3	207	74	1	6	580	63	7	9	0	0	0	0	0	0	0	0	7,167	1,165	14	3
9	Eelevana, soore	14,587	6,878	22,057	43,522	1,168	404	4	0	727	79	8	3	971	106	6	9	13	2	10	0	64	7	0	1	23	1	9	0	396	30	12	0	4,033	632	2	1
10	Teeullore	18,321	7,080	22,078	47,484	2,251	473	2	6	514	56	3	6	777	84	15	9	1	0	3	6	197	21	8	9	1,432	110	10	2	550	42	12	2	5,624	789	8	4
11	Collacoorchey	15,395	6,369	45,740	67,444	1,863	393	14	9	349	37	3	0	408	55	1	6	0	0	0	0	434	47	7	5	195	15	9	9	54	4	3	6	2,494	356	1	0
12	Chaltput	28,856	9,227	32,845	70,930	1,741	381	8	2	571	62	7	3	660	74	4	2	0	0	0	0	89	9	11	9	2,474	270	7	6	50	3	14	3	6,585	802	5	1
	Total	2,36,333	79,609	2,39,947	5,55,889	22,399	5,804	8	3	9,879	1,081	2	7	14,575	1,622	0	0	1,567	338	9	4	10,995	1,202	7	11	26,531	2,030	4	7	2,733	212	9	5	89,180	11,491	2	3
13	Cuddalore	4,082	964	2,599	7,645	146	62	2	0	11	1	3	3	25	19	0	6	0	0	0	0	382	43	9	0	196	19	4	0	20	3	0	0	850	188	2	9
	Grand Total	2,40,415	80,573	2,42,546	5,63,534	22,545	5,866	10	3	9,890	1,082	5	10	14,600	1,641	0	6	1,567	338	9	4	11,377	1,246	0	11	26,727	2,049	8	7	2,753	215	9	5	90,030	11,679	5	0

* Bassia longi folia, or oil nut tree.

Statistical Table for the Zillah of Chingleput, for the year 1837.

No.	NAMES OF THE TALOOKS.	Villages and Hamlets.	Ploughs.	Population.			Horses.	Cattle and Sheep.					Extent of land cultivated.	Sources of Irrigation.											
				Male.	Female.	Total.		Bullocks.	Cows.	Male Buffaloes.	Female Buffaloes.	Sheep and Goats.	Cawelam.	Tanks.		Spring Channels.		River Channels.		Wells large and small & Ponds.		Anicuts		Sluices.	
														In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.	In repair.	Out of repair.
1	Carangoly																								
2	Ootramaloor																								
3	Conjeveram																								
4	Chingleput	2,300	21,791	1,7[illegible]47	1,61,924	3,36,375	68,089	96,530	1,00,688	16,686	26,781	7[illegible],570	71,661	2,295	627	256	110	141	51	4,912	2,843	46	3	95	30
5	Manimungalum																								
6	Tiroupporoor																								
7	Sydapet																								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